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THE ARMY.

ULYSSES S. GRANT,
President and Commander-in-Chief.

THE PRESIDENT'S MESSAGE.

[Below are extracts of the President's Message touching points of chief interest to our readers.]

THE ARMY.

The report of the Secretary of War, herewith attached, and forming a part of this Message, gives all the information concerning the operations, wants, and necessities of the Army, and contains many suggestions and recommendations which I commend to your special attention.

There is no class of Government employees who are harder worked than the Army officers and men, none who perform their tasks more cheerfully and efficiently and under circumstances of greater privations and hardships. Legislation is desirable to render more efficient this branch of the public service.

All the recommendations of the Secretary of War I regard as judicious, and I especially commend to your attention the following: The consolidation of the Government arsenals; the restoration of mileage to officers travelling under orders; the exemption of money received from the sale of subsistence stores from being covered into the Treasury; the use of appropriations for the purchase of subsistence stores without waiting for the beginning of the fiscal year for which the appropriation is made; for additional appropriations for the collection of torpedo material; for increased appropriation for the manufacture of arms; for relieving the various States from indebtedness for arms charged to them during the rebellion; for dropping officers from the rolls of the Army without trial for drawing pay more than once for the same period; for the discouragement of the plan to pay soldiers by checks, and for the establishment of a professorship of rhetoric and English literature at West Point. The reasons for these recommendations are obvious and are set forth sufficiently in the report attached. I also recommend that the status of the staff corps of the Army be fixed, where this has not already been done, so that promotions may be made and vacancies filled as they occur in each grade, when reduced below the number to be fixed by law. The necessity for such legislation is specially felt now in the Pay Department. The number of officers in that department is below the number adequate to the performance of the duties required of them by law.

THE NAVY.

The efficiency of the Navy has been largely increased during the last year. Under the impulse of the foreign complications, which threatened us at the commencement of the last session of Congress, most of our efficient wooden ships were put in condition for immediate service, and the repairs of our ironclad fleet were pushed with the utmost vigor. The result is that most of these are now in an effective state, and need only to be manned and put in commission to go at once into service. Some of the new sloops authorized by Congress are already in commission, and most of the remainder are launched and wait only the completion of their machinery to enable them to take their places as part of our effective force. Two iron torpedo ships have been completed during the last year, and four of our large double-turreted ironclads are now undergoing repairs. When these are finished everything that is useful of our Navy as now authorized will be in condition for service, and with the advance in the science of torpedo warfare the American Navy, comparatively small as it is, will be found at any time powerful for the purposes of a peaceful nation.

Much has also been accomplished during the year in aid of science, and to increase the sum of general knowledge, and further the interest of commerce and civilization; extensive and much-needed soundings have been made for hydrographic purposes, and to fix the proper routes of ocean telegraphy; further surveys of the great isthmus have been undertaken and completed, and two vessels of the Navy are now employed in conjunction with those of England, France, Germany, and Russia, in observations connected with the transit of Venus, so useful and interesting to the scientific world.

The estimates for this branch of the public service do not differ materially from those of last year, those for the general support of the service being somewhat less, and those for permanent improvements at the various stations rather larger than the corresponding estimate made a year ago. The regular maintenance and a steady increase in the efficiency of this most important arm in proportion to the growth of our maritime intercourse and interests is

recommended to the attention of Congress. The use of the Navy in time of peace might be further utilized by a direct authorization of the employment of naval vessels in explorations and surveys of the supposed navigable waters of other nationalities on this continent, especially the tributaries of the two great rivers of South America, the Orinoco and the Amazon; nothing prevents under existing laws such exploration, except that expenditures must be made in such expeditions beyond those usually provided for in the appropriations. The field designated is unquestionably one of interest, and one capable of large development of commercial interests, advantageous to the peoples reached and to those who may establish relations with them.

THE INDIAN PEACE POLICY.

The policy adopted for the management of Indian affairs, known as the peace policy, has been adhered to with most beneficial results. It is confidently hoped that a few years more will relieve our frontiers from danger of Indian depredations. I commend the recommendation of the Secretary for the extension of the Homestead laws to the Indians, and for some sort of Territorial Government for the Indian Territory. A great majority of the Indians occupying this Territory are believed to be incapable of maintaining their rights against the more civilized and enlightened white men. Any Territorial form of Government given them, therefore, should protect them in their homes and property for a period of at least twenty years, and before its final adoption should be ratified by a majority of those affected.

THE PENSION OATH.

The act of Congress providing the oath which pensioners must subscribe before drawing their pensions cuts off from this bounty a few survivors of the war of 1812 residing in the Southern States. I recommend the restoration of this bounty to all such. The number of persons whose names would thus be restored to the list of pensioners is not large. They are all old persons who could have taken no part in the rebellion, and the services for which they were awarded pensions were in defence of the whole country.

WAR DEPARTMENT.

W. W. Belknap, Secretary of War.

Brigadier-General E. D. Townsend, Adjutant-General.

Casualties among the Commissioned Officers of the U. S. Army reported to the Adjutant-General's Office during the week ending Saturday, November 28, 1874.

First Lieutenant René E. De Russy, Second Artillery—Resigned November 16, 1874.
Second Lieutenant Frank P. Reap, Tenth Cavalry—Resigned November 18, 1874.

ABSTRACT OF SPECIAL ORDERS.

Issued from the War Department, Adjutant-General's Office, for the week ending December 7, 1874.

Tuesday, December 1.

To correct his records on the rolls, and to cover services rendered in the field, so much of Special Orders No. 483, Par. 22, dated October 29, 1863, from this office, as discharged Colonel Régis de Trobriand, 38th New York Volunteers, to date October 15, 1863, is amended to date November 21, 1863.

To be discharged.—Corporal Daniel O. Drennan, General Service Detachment, U. S. Army, at Headquarters Military Division of the Missouri, now on detached service in this office, to date January 28, 1875.

Second Lieutenant Philip Rease, Third Infantry, will report in person to the Chief Signal Officer of the Army for duty.

Wednesday, December 2.

So much of Par. 3, Special Orders No. 260, November 30, 1874, from this office, as directs the medical officers therein named to join their first stations at their own expense, under Par. 1115, Revised U. S. Army Regulations of 1863, is amended to direct them to join their stations under Par. 1116, of said Regulations.

Revoked.—Transfer of Private Joseph Adams, General Mounted Service U. S. Army, to the General Service U. S. Army.

Restored without trial and transferred.—Private Joseph Adams, A, Twenty-second Infantry, to the General Service U. S. Army, for assignment to a regiment, to date December 16, 1873.

[No Special Orders were issued from the Adjutant-General's Office on the following dates: Thursday, December 3, 1874; Saturday, December 5, 1874.

Friday, December 4.

The Board of Officers convened by Special Orders No. 252, Par. 2, November 18, 1874, from this office, having completed the examination in the case of Corporal Charles L. Hodges, General Service Detachment, U. S. Army, Headquarters Department of the South, he will return to his proper station.

Leave of absence for one month is granted First Lieutenant James A. Haughey, Twenty-first Infantry (Newport Barracks, Ky.)

Restored without trial and transferred.—Unassigned Recruit David Norton, First Infantry, to F, Third Artillery.

Second Class Private Patrick Hickie, Ordnance Detachment, U. S. Army, now at Benicia Arsenal, Cal., will be discharged the service of the United States on receipt of this order at the place where he may be serving.

Revoked.—Transfer of Private Frank Fought, M, Fifth Artillery, to B, Fifth Cavalry; transfer of Private Charles C. Rosenfeldt, B, First Battalion Eighteenth Infantry, to G, Twenty-third Infantry.

Transferred.—Private Charles Rosenfeldt, B, First Battalion Eighteenth Infantry, now at Omaha Barracks, Neb., to G, Twenty-third Infantry, stationed at that post.

Monday, December 7.

To be discharged.—Private James Sagrs, M, Eighth Cavalry, now with his command; Private Washington F. Cassell, General Service U. S. Army, now in the office of the Chief Signal Officer of the Army; Privates James A. A. Mullen, F, Sixteenth Infantry, now with his command; George Hall, B, Sixth Cavalry; Joseph Dattler, General Service U. S. Army, now with the Signal Service Detachment, at Fort Whipple, Va.

Transferred.—Sergeant Edward D. Hughes, C, Nineteenth Infantry, now supposed to be with his command, as a private to the General Service, at Fort Columbus, N. Y. H.

Leave of absence for six months from the 1st instant on Surgeon's certificate of disability, with permission to go beyond sea, is granted Chaplain Manuel J. Gonzales, Ninth Cavalry (Kingold Barracks, Texas.)

Transportation to Soldier's Home.—Furnished Edward Kerrigan, formerly private, B, Sixth Cavalry, from Dayton, O.

If deemed necessary by the Lieutenant-General commanding Military Division of the Missouri, First Lieutenant John C. Thompson, Third Cavalry, will proceed to Fort McPherson, Neb., and report to the commanding officer of that post, to settle his accounts and returns under the supervision of that officer. On the completion of this duty he will return to his station.

HEADQUARTERS OF THE ARMY.

W. T. Sherman, General of the Army of the United States.

Colonel W. D. Whipple, Assistant Adjutant-General.

Hereafter the number of horses attached to a battery of artillery of four guns, in time of peace, will be fifty, except in special cases which may render a greater number necessary, which will be reported to these Headquarters.

Commanding Officers of batteries will take steps to cause the number of horses attached to their commands to conform to the requirements of this order. (G. O. No. 6, December 1.)

1. Officers of the Army arriving in the city of St. Louis, Mo., are required to call at these Headquarters and register their names. This does not apply to officers passing directly through en route to some other point. (G. O. No. 7, December 4.)

2. Officers absent from their commands on detached service, leaves of absence or sick, will report to these Headquarters each change of their address, after leaving their proper stations, until their return to them. Reports by postal card will meet the requirements of this order. (Ibid.)

Upon the mutual application of the officers concerned, approved by the Commanding General Military Division of the Pacific, the following transfers are announced in the Fourth Artillery: First Lieutenant M. F. Newkirk, from Company C to Company F, vice First Lieutenant S. W. Taylor, from Company F to Company C. (S. O. No. 55, Nov. 28.)

As contemplated by Par. 5, War Department, General Orders No. 81, August 1, 1873, a Board of Officers to consist of Colonel J. B. Tourtelotte, Aide-de-Camp; Lieutenant-Colonel P. T. Swaine, Fifteenth Infantry; Surgeon C. T. Alexander, U. S. Army; First Lieutenant W. T. Hartz, Fifteenth Infantry, is appointed to meet at these Headquarters, on December 9, 1874, at 10 o'clock A. M., or as soon thereafter as practicable, for the examination of Edwin L. Fletcher, an applicant for the appointment of Second Lieutenant in the Army of the United States. The duties of the Medical Officer will be confined to the medical examination. The junior member will act as recorder. (S. O. No. 56, December 2.)

MILITARY DIVISION OF THE MISSOURI.

Lieutenant-Gen. P. H. Sheridan: Hdq'r's Chicago, Ill.

General Miles' Command.—Lieutenant General Sheridan, December 5, received the following despatch:

CAMP ON THE WASHITA, TEXAS, Dec. 1, 1874.

Miles' encampment is at the head of the timber on the Washita. He has nine companies of infantry here and another will be up soon from Camp Supply. Major Compton, with four companies of cavalry, is on the Sweetwater, sixteen miles distant. The four companies of the Eighth Cavalry are at Adobe Walls. The troops have suffered somewhat for want of clothing. If forage gets up Miles will move on or about the 10th across the headwaters of the creeks emptying into the North Fork of the Red River to the headwaters of the main Red River, meeting there the Eighth Cavalry, who are directed to move fifty miles up the Canadian,

It is generally believed that the Indians who are still out have taken refuge in the ravine near the headwaters of the Red River. If Miles had forage he would start to-day. The horses and mules are thin in flesh, but otherwise are in fair condition.

DEPARTMENT OF DAKOTA.

Brig.-General Alfred H. Terry: Headquarters, St. Paul, Minn. *Twentieth Infantry.*—Second Lieutenant W. H. Low, Jr., was November 28 relieved from his present duty, and directed to join his proper station, Fort Snelling, Minn., and report to the commanding officer for duty.

Leave of absence for one month was November 30 granted Major J. E. Yard, Twentieth Infantry (Fort Pembina, D. T.), with permission to apply through the proper channels for an extension of three months and fifteen days—the leave to take effect on the 1st day of January, 1875.

Medical Department.—The contract of A. A. Surgeon H. R. Porter, U. S. Army, was December 1 terminated at his own request.

Seventeenth Infantry.—First Lieutenant F. D. Garrett was ordered December 1 to proceed with the guard and prisoner under his charge to Stillwater, Minn., delivering the prisoner to the Warden of the Minnesota State Penitentiary. Upon completion of this duty Lieutenant Garrett and guard will return to their proper station, Fort Wadsworth, D. T.

The commanding officer of Company D, Seventeenth Infantry, was directed November 24 to at once proceed with his command to and take post at Fort Abraham Lincoln, leaving a small guard at Camp Hancock for the protection of public buildings, property, etc., as directed in the orders above quoted. Until further orders Camp Hancock will be considered as forming a part of the post of Fort Abraham Lincoln.

Pay Department.—Leave of absence for one month was November 30 granted Major A. H. Seward, paymaster, U. S. Army, chief paymaster of the department (St. Paul, Minn.) Before taking advantage of this leave Major Seward will transfer all public funds in his possession to Major William Smith, paymaster, U. S. Army.

DEPARTMENT OF THE MISSOURI.

Brigadier-General John Pope: Headquarters, Fort Leavenworth. *Judge-Advocate.*—Major D. G. Swaim, Judge-advocate U. S. Army, was November 25 directed to proceed to Topeka, Kas., or elsewhere, for the purpose of making an investigation in regard to the reported destitute condition of certain persons in Kansas.

Fifth Infantry.—Captain D. H. Brotherton was November 30 assigned to the command of the post of Fort Leavenworth, Kas., and ordered to assume the duties without delay.

Medical Department.—A. A. Surgeon C. A. Sewall, U. S. Army, was November 30 relieved from duty at Santa Fe, N. M., and ordered to proceed, without delay, to Fort Bayard, N. M., and report to the commanding officer of that post for duty.

A. A. Surgeon A. N. Ellis, U. S. Army, was December 2 relieved from duty at Fort Wallace, Kas., and ordered to report for duty, without delay, to the officer commanding the detachment of troops stationed at Caldwell, Kas.

Sixth Cavalry.—The leave of absence for seven days granted First Lieutenant J. H. Sands, adjutant (Fort Hays, Kas.), was November 30 extended five days.

Subsistence Department.—Captain Charles P. Egan, commissary of subsistence, U. S. Army, was December 3 assigned to duty as chief commissary of subsistence of the District of New Mexico, relieving First Lieutenant George F. Foote, R. Q. M., Eighth Cavalry, who will turn over to Captain Egan all public funds, stores, property, etc., for which he is responsible as acting commissary of subsistence.

DEPARTMENT OF THE PLATTE.

Brigadier-General E. O. C. Ord: Headquarters, Omaha, Neb.

Quartermaster's Department.—Permission was November 21 given Captain E. D. Baker, A. Q. M., U. S. Army, to apply to headquarters Military Division of the Missouri, for an extension of twenty days of the leave of absence granted him from department headquarters.

Twenty-third Infantry.—Second Lieutenant Andrew T. Miller was November 23 ordered to proceed to join his company at Cheyenne Depot.

First Lieutenant John F. Trout, Twenty-third Infantry, was November 24 placed on special duty in charge of issues of condemned Government clothing to such sufferers from the grasshopper plague in Nebraska, as may actually stand in need thereof.

To enable him to perform the duties with which he was charged in previous orders, First Lieutenant John F. Trout, Twenty-third Infantry, was November 28 appointed acting assistant quartermaster.

Third Cavalry.—Leave of absence for fifteen days was November 23 granted First Lieutenant Peter D. Vroom, Jr.

Major John V. Du Bois, Captain Henry W. Wessells, Jr., and Second Lieutenant George F. Chase, Third Cavalry, are detailed as additional members of the General Court-martial previously instituted, vice Capt. Guy V. Henry, Third Cavalry; Second Lieutenant G. Goddes Smith, Twenty-third Infantry, and Second Lieutenant James H. Winters, Twenty-third Infantry, was November 30 relieved.

Camp Sheridan.—A General Court-martial was appointed to meet at Camp Sheridan, Neb., December 7. Captain Alexander Sutorius, Third Cavalry, and the following officers of the Ninth Infantry were detailed for the court: Major E. F. Townsend; First Lieutenants William W. Rogers, William B. Pease, William L. Carpenter; Second Lieutenants James McB. Stembel, John A. Baldwin. Second Lieutenant William Abbott, judge-advocate.

Fort Fred. Steele.—A General Court-martial was appointed to meet at Fort Fred. Steele, W. T., December 1. Detail for the court: Colonel Joseph J. Reynolds, Third Cavalry; Lieutenant-Colonel Albert G. Brackett, Second Cavalry; Captain Thomas B. Dewees, Second Cavalry; Assistant Surgeon J. H. Patzki, U. S. Army; First Lieutenant Patrick H. Breslin, Fourth Infantry; Second Lieutenants Daniel C. Pearson, Second Cavalry; Lewis Merriam, Fourth Infantry. Second Lieutenant Frederick W. Kingsbury, Second Cavalry, judge-advocate.

DEPARTMENT OF TEXAS.

Brigadier-Gen. C. C. Augur: Headquarters, San Antonio, Texas.

Operations against Indians.—The following telegram was received from Headquarters Fort Sill Column, Camp on the North Fork, Nov. 23, 1874, last week:

Gen. C. C. Augur, Commanding Department, San Antonio, Tex.

This command struck the camp of the Cheyennes on the North Fork on the 8th inst., and destroyed it. My effective force of 160 picked men and horses pursued them from the fork of McClellan's Creek to the Canadian, westward 96 miles, from whence the exhausted state of the stock rendered a return necessary. The Indians were pursued so closely as to force them to abandon ponies and mules packed, and were engaged by the scouts on the second and third days, but could not be brought to a stand. On the morning of the 13th began a violent rain-storm, changing to sleet and snow, which lasted until the morning of the 19th, freezing to death nearly 100 animals, and freezing the feet of 26 men.

J. W. DAVIDSON,

Brevet Major-General Commanding.

MILITARY DIVISION OF THE SOUTH.

Major-General I. McDowell: Headquarters, Louisville, Ky.

DEPARTMENT OF THE SOUTH.

Major-General I. McDowell: Headquarters, Louisville, Kentucky.

Medical Department.—A. A. Surgeon E. B. Moseley, U. S. Army, awaiting orders at McPherson Barracks, Atlanta, Ga., was ordered December 4 to proceed to Columbia, S. C., and report for duty. A. A. Surgeon Frank Atkisson, at Columbia, S. C., to proceed to Laurens, S. C., and report for duty.

Second Artillery.—Official information has been received from the War Department of the following promotion of an officer of the Second Artillery: Second Lieutenant William Stanton, Company D, Barnwell, S. C., to be first lieutenant, vice De Russy, resigned, which carries him to Company I, Raleigh, N. C. Lieutenant Stanton will join his company without unnecessary delay.

Columbia.—A General Court-martial was appointed to meet at Columbia, S. C., December 12, for the trial of First Lieutenant Thomas D. Maurice, Second Artillery, and such other persons as may be brought before it by authority from department headquarters. First Lieut. J. H. Counselman, adjut., 1st Artillery, and the following officers of the Eighteenth Infantry were detailed for the court: Lieutenant-Colonel Henry M. Black; Captains Richard L. Morris, William H. McLaughlin, Thomas J. Lloyd; First Lieutenants Henry H. Adams, Michael Leahy. Captain B. B. Keeler, judge-advocate.

Eighteenth Infantry.—The General Court-martial of which Lieutenant-Colonel Henry M. Black, is president, is dissolved.

Atlanta.—A General Court-martial was appointed to convene at Atlanta, Ga., December 8. Captain Jacob Kline, Eighteenth Infantry, and the following officers of the Second Infantry were detailed for the court: Captains William Mills, William Falck; First Lieutenants Abner Haines, Jr., Luther S. Ames; Second Lieutenants John K. Waring, Edmund K. Webster. First Lieutenant Augustus R. Egbert, judge-advocate.

Charleston.—A General Court-martial was appointed to convene at Charleston, S. C., December 10. First Lieutenant George Mitchell, Second Artillery, and the following officers of the First Artillery were detailed for the court: Captains Richard H. Jackson, William L. Haskin; First Lieutenant John W. Dillenback; Second Lieutenant John Pope, Jr. First Lieutenant James L. Sherman, judge-advocate.

Fort Macon.—A General Court-martial was appointed to convene at Fort Macon, N. C., December 8. Assistant Surgeon Calvin DeWitt, U. S. Army, judge-advocate of the court, and the following officers of the Second Artillery were detailed for the court: Captains John I. Rodgers, Frank B. Hamilton; First Lieutenants John McGilvray, John A. Campbell; Second Lieutenant Wright P. Edgerton.

Nashville.—A General Court-martial was appointed to convene at Nashville, Tenn., December 7. The following officers of the Sixteenth Infantry were detailed for the court: Captains Caleb R. Layton, Duncan M. Vance, W. G. Wedemeyer; First Lieutenants George H. Palmer, William V. Richards, adjutant; Second Lieutenants Leven C. Allen, Charles R. Tyler. First Lieutenant Merritt Barber, judge-advocate.

Mount Vernon Barracks.—A General Court-martial was appointed to convene at Mount Vernon Barracks; Ala., December 10. The following officers of the Second Infantry were detailed for the court: Captain Frederick E. Camp; First Lieutenants Charles Keller, R. Q. M., Charles Harkins; Second Lieutenants Sidney E. Clark, John Kinzie. First Lieutenant Charles A. Dempsey, adjutant, judge-advocate.

DEPARTMENT OF THE GULF.

Colonel W. H. Emory: Headquarters, New Orleans, La.

Quartermaster's Department.—Major J. A. Potter, quartermaster, U. S. Army, was December 1 assigned to duty in the office of the chief quartermaster of the department.

Payment of Troops.—Major George L. Febiger, paymaster, U. S. Army, was ordered December 1 to Jackson, Miss., for the purpose of paying the troops newly arrived at that post.

Medical Department.—Leave of absence for one month was December 1 granted Assistant Surgeon George M. Sternberg, U. S. Army (Barrancas Barracks, Fla.), to take effect upon the arrival of another medical officer at his post.

A. A. Surgeon Charles Pelaez, U. S. Army, was December 3 assigned to duty at Barrancas Barracks, Fla., for duty.

Thirteenth Infantry.—The General Court-martial previously ordered, and of which Colonel P. R. De Trobriand, is president, was in consequence of the necessary movement of troops in New Orleans ordered to convene on the 8th instead of the 1st of December as directed.

Captain A. MacArthur, Jr., Thirteenth Infantry, was November 26 relieved from duty as member of a General Court-martial previously constituted and detailed as judge-advocate of the same court vice Captain Luke O'Reilly, Nineteenth Infantry, A. D. C., who was relieved from that duty. Captain Charles Hobart, Third Infantry, was detailed as a member of the same Court-martial.

Lieutenant-Colonel Henry A. Morrow, Thirteenth Infantry, was December 3 ordered to proceed, via Memphis and Little Rock, to Shreveport, La., and such other points on the Upper Red River as he may find necessary in discharge of the duty to which he has been assigned by the department commander. After completing this duty Lieutenant-Colonel Morrow will return to New Orleans.

MILITARY DIVISION OF THE ATLANTIC.

Major-General W. S. Hancock: Headquarters, New York.

Officers Registered.—The following officers were registered at the Headquarters Military Division of the Atlantic, for the week ending December 8, 1874: Chaplain Hiram Stone, U. S. Army; Major G. A. Gordon, Fifth Cavalry; Assistant Surgeon D. L. Huntington, U. S. Army; Captain G. A. Price, Fifth Cavalry; First Lieutenant W. P. Clark, Second Cavalry; Lieutenant-Colonel M. M. Blunt, Twenty-fifth Infantry; Second Lieutenant C. G. Ayres, Twenty-fifth Infantry; Major Alexander Chambers, Fourth Infantry; Lieutenant-Colonel A. McD. McCook, Tenth Infantry; Captain Richard Arnold, Fifth Artillery; Major G. K. Warren, Engineer Corps; Lieutenant-Colonel J. McAllister, Ordnance Corps; Lieutenant-Colonel R. Saxton, Quartermaster's Department; First Lieutenant S. E. Blunt, Thirteenth Infantry.

Quartermaster's Department.—Leave of absence for ten days was December 1 granted Lieutenant-Colonel Rufus Saxton, D. Q. M.-G., U. S. A. (Buffalo, N. Y.)

First Cavalry.—Leave of absence for fifteen days was December 1 granted Lieutenant-Colonel Washington L. Elliott (Headquarters Military Division of the Atlantic, New York City).

Fifth Cavalry.—Leave of absence for twenty-one days, to take effect on the 16th instant, was December 5 granted Captain George A. Kinsel (Fort Trumbull, Conn.)

Fifth Artillery.—On the recommendation of his commanding officer the unexpired portion of the sentence of General Court-martial in the case of Captain Edmund C. Bainbridge, was December 5 remitted.

Leave of absence for one month was December 2 granted First Lieutenant William Butler Beck, R. Q. M., Fifth Artillery (Fort Adams, R. I.)

First Lieutenant Garland N. Whistler, Fifth Artillery, in addition to his duties as post quartermaster at Fort Independence, was December 2 ordered to discharge, until further orders, those of chief quartermaster of the Second Quartermaster District, at Boston, Mass.

Medical Department.—Assistant Surgeon Washington Matthews, U. S. Army, was December 7 relieved from duty at Fort Hamilton, and ordered to proceed, without delay, to Fort Wood, N. Y. H., for duty as post surgeon.

Medical Officers.—The following named medical officers having reported by letter to department headquarters, in compliance with par. 3, S. O. No. 260, c. s., W. D., was December 7 assigned to duty at the posts set opposite their names and ordered to report, in person, accordingly, viz.: Assistant Surgeon Paul R. Brown, to duty at Fort Hamilton, N. Y. H.; Assistant Surgeon S. S. Bedal, to duty at Fort Wadsworth, N. Y. H.; Assistant Surgeon J. A. Finley, to duty at Fort Monroe, Va.

Leave of Absence.—Leave of absence for the period indicated opposite their names was December 7 granted the following officers on duty at the Artillery School, Fort Monroe, Va.:

First Lieutenant Alonzo E. Miltimore, First Artillery, from December 23, 1874, to January 3, 1875.

Captain Samuel N. Benjamin, Second Artillery, thirteen days, from December 23, 1874.

Second Lieutenant Edmund M. Cobb, Second Artillery, from Dec. 23, 1874, to Jan. 3, 1875.

Second Lieutenant Ira McNutt, Third Artillery, from Dec. 23, 1874, to Jan. 3, 1875.

Second Lieutenant Benjamin H. Randolph, Third Artillery, from Dec. 23, 1874, to Jan. 3, 1875.

Captain Richard Lodor, Fourth Artillery, from Dec. 22, 1874, to Jan. 10, 1875.

First Lieutenant C. A. L. Totten, Fourth Artillery, from Dec. 23, 1874, to Jan. 3, 1875.

Second Lieutenant J. E. Bloom, Fourth Artillery, from Dec. 18, 1874, to Jan. 3, 1875.

First Lieutenant Paul Roemer, Fifth Artillery, from Dec. 23, 1874, to Jan. 3, 1875.

First Lieutenant Frank Thorp, Fifth Artillery, from Dec. 23, 1874, to Jan. 3, 1875.

Second Lieutenant William B. Homer, Fifth Artillery, from Dec. 23, 1874, to Jan. 3, 1875.

Second Lieutenant W. H. Coffin, Fifth Artillery, from Dec. 23, 1874, to Jan. 3, 1875.

First Lieutenant J. F. Weston, Seventh Cavalry, from Dec. 18, 1874, to Jan. 3, 1875.

First Lieutenant John L. Clem, Twenty-fourth Infantry, from Dec. 23, 1874, to Jan. 3, 1875.

Retiring Board.—Major D. B. McKibbin, Tenth Cavalry, having reported for examination by the board to retire disabled officers, convened in New York, and the board having completed his case, was ordered December 7 to return to his home at Chambersburg, Pa.; Colonel Charles R. Woods, Second Infantry, having reported for examination by the board to retire disabled officers, and the board having completed his case, was same date ordered to return to his home at Newark, Ohio.

REPORT OF THE SECRETARY OF WAR.

Mr. PRESIDENT: By the operation of the fifth section of the act of June 20, 1874, all unexpended balances of appropriations which had remained on the books of the Treasury for two fiscal years previous to the 1st of July last, excepting such amounts as were required to meet unfulfilled contracts at the time of the passage of said act were carried to the surplus fund of the Treasury. This necessitated estimates by this Department for various objects, the appropriations for which have always been available at any time.

In the item for payment of arrears of pay due to officers and men of volunteers, the sum of \$515,852.77 is required. Also for payment of arrears of bounty due the same, \$384,147.23. These, together with other items of a like nature, for which estimates have not been heretofore required, are now included in the aggregate estimates of the Department.

The Department is justly entitled to credit for the large sums of previous appropriations which will be turned into the Treasury as the result of the act aforesaid.

The actual expenditures of the War Department for the year ending June 30, 1873, including river and harbor improvements, were..... \$46,325,308 21
The same for the last fiscal year, ending June 30, 1874..... 42,326,314 71

Showing a reduction of..... 3,998,993 50

The estimates for the military establishment for the fiscal year, ending June 30, 1875, were..... 34,410,722 89
Those submitted for the ensuing fiscal year are... 32,488,969 50

Showing a reduction of..... 1,921,753 39

The estimates of the Chief of Engineers for fortifications, river and harbor improvements, and public buildings and grounds, and Washington aqueduct, for the fiscal year, ending June 30, 1875, were..... 30,459,396 00
His estimates for the fiscal year, ending June 30, 1876, are as follows, viz:
Fortifications and other works of defence..... \$2,108,700 00
Geographical and military surveys..... 399,000 00
Improvements of rivers and harbors..... 13,385,500 00
Public buildings and grounds and Washington aqueduct..... 678,410 50

Showing a reduction of..... 16,471,610 50

The total estimates of the War Department, for all purposes, for the fiscal year, ending June 30, 1875, were..... \$60,180,923 89
The same for the ensuing fiscal year are..... 53,144,499 00

Showing a reduction in favor of those for the ensuing year of..... 7,036,424 89

The estimates for the military establishment for the fiscal year, ending June 30, 1876, are..... 32,488,969 50
The appropriations for the current fiscal year were..... 28,582,392 00

Excess of next year's estimates over this year's appropriations..... 3,906,577 50

RECRUITING FOR THE ARMY.

In the act making appropriations for the support of the Army, approved June 16, 1874, \$105,000 was allowed for recruiting purposes, and it was provided that "no money appropriated by this act shall be paid for recruiting the Army beyond the number of twenty-five thousand enlisted men, including Indian scouts." This prohibition fell in an unfortunate time and manner. The demands for the services of United States troops have been increased, and have been imperative for Indian and other service, ever since the adjournment of Congress; and serious consequences might easily have attended the manifest want of any considerable reliable force. There was no margin for emergencies such as have arisen in connection with Indian affairs and the troubles with the South. I was opposed to the reduction at the time it was made, and have since had no reason to change the opinion then formed. The reduced appropriations for Army purposes have been too heavily taxed by the necessity of movements of troops; for, when obliged to be scattered at points on sudden emergencies, they have been moved from other points where their presence was needed, and had to be returned at the earliest possible moment. The reduction proposed and insisted on by Congress would, when it was accomplished, save alone the pay, subsistence and clothing of five thousand men; but this amount cannot all be considered as having been saved, for when troops were needed at points where the force was found, in consequence of the reduction to be too small for real service, other troops from other points were required to be transported at an expense almost large enough to equal in amount the saving from the other sources named.

Besides, the number of posts were not reduced; the necessities of the service required that they should be garrisoned, and, although they were occupied by very small forces, yet the expense incident to the retention and operation of the posts existed to almost as great an extent as it would have done had the number on duty been larger. In my judgment, if a reduction of the Army is to be made, it can only be made by reducing the number of officers and men; in other words, by reducing the number of regiments. How can that be done in the present interests of the service, with the condition of affairs which requires the retention of the posts now in existence, and, indeed, the establishment of others, is a problem which must be determined if the reduction is insisted upon.

As might have been expected, the loss by discharge and other casualties has fallen most heavily upon companies stationed in the disturbed districts, where effective strength is most needed. It may not be true economy to limit the President so strictly to fixed numbers of enlisted men in the Army. It may be better to empower him, in his sound discretion, to increase any companies to one hundred enlisted men. Ordinarily, then, the maximum would not exceed sixty-five or seventy; and when a sudden necessity arises detachments of recruits would be rapidly sent forward to the commands needing re-inforcements. Effective strength would thus be readily obtained, without increased expense on account of quarters, or of additional commissioned officers, as when organized companies have to be moved. It would be easy to maintain in a depot a limited body of well-drilled recruits, who would be effective the moment they joined their companies, and this would obviate very many of the objections existing to our present system.

I again commend to Congress the propriety of authorizing the enlistment of boys as field musicians, as was formerly done. The arguments in favor of this measure are clearly laid down in previous reports.

Reflection as to the amount necessary to be appropriated for the ensuing fiscal year, satisfies me that the appropriation for clothing, pay, and subsistence should be made for the Army upon a basis of 30,000 men. This would most certainly prevent any deficiency, and should appropriations to that extent be made, whatever surplus might remain on hand would be, under existing laws, turned into the Treasury.

QUARTERMASTER'S DEPARTMENT.

By the strictest economy, amounting almost to privation, and the cutting off of some of the allowances to which the troops were entitled by law and regulation, the expenditures of the Quartermaster's Department have been kept within the appropriations.

There are about 5,000 buildings under charge of the Quartermaster's Department to be kept in repair, to be renewed as they decay, or to be replaced by others in new positions when abandoned in the course of military movements. As long as the Army is in many localities badly sheltered, living in huts and adobe buildings sadly in need of repair, the roofs leaking, and the walls open to the inclement weather, I must repeat what I have so often insisted upon, that the appropriation for "barracks and quarters," out of which building material is purchased, and the appropriation for "incidental expenses of the Quartermaster's Department," from which the expenses of the hire of labor is paid, are, as for some years they have been, entirely inadequate to the necessities of the service and the health and comfort of our troops. I call attention to these items again, in the hope, when the proper Committee of Congress takes up the consideration of the appropriations for the Quartermaster's Department, that the amount estimated for the next fiscal year for this purpose may be appropriated in full.

A leading subject connected with the economy of the administration of this Department is the date upon which the fiscal year begins. The fiscal year now commences on the 1st day of July, as provided by the act approved August 26, 1842. An examination of the statutes fails to show that a fiscal year had even been by law formally established previous to that date, and it must be presumed that the estimates and appropriations were therefore made for the calendar year from January 1 to December 31.

The first recommendation for the passage of a law fixing the date upon which the fiscal year was to begin, was that of the Secretary of the Treasury, in his annual report of December 4, 1834, in these words:

It appears to the undersigned that a change in the commencement of the fiscal year, and of the time at which annual appropriations begin, would be a great improvement in the financial operations of the Government. If the year was to commence after the last day of March instead of September, and the annual appropriations begin the same date, many delays and embarrassments could be avoided, and the information on the condition of the receipts and expenditures of the previous year, to be laid before Congress each session, could be more full and accurate.

This recommendation was reiterated in two succeeding reports by Mr. Secretary Woodbury, in 1835 and 1836, but no detailed statements of the embarrassments and delays alluded to was made in any of his reports, nor did he demonstrate in what manner the change would effect an improvement in the financial operations of the Government. He dismissed the subject with the simple statement above quoted. Congress, however, gave no special atten-

tion to the matter until the year 1842, when Senator Evans, on June 23, of that year, introduced the bill which is now the law, fixing the fiscal year to commence on the 1st of July in each year. It will be observed that the date recommended by Secretary Woodbury was April 1, and that adopted was July 1. A reference to the Congressional Globe discloses the fact that no extended debate was had upon the measure, and it passed, without being referred to a committee, upon the simple statement of Mr. Woodbury, then a Senator, "that the object of the bill was a deplorable one—to make the fiscal year correspond with the commercial year." Thus the considerations which moved Congress to pass this important measure do not appear in the proceedings of that body, and particularly are we at a loss to discover the reason for establishing the 1st day of July in each year, instead of the 1st day of April, as recommended by Mr. Woodbury when Secretary of the Treasury, and also what was meant by him in stating that the fiscal year would then correspond with the commercial year.

Having thus endeavored to trace the course of legislation upon this subject, and without avail, striven to discover the moving causes therefor, it now remains for me to illustrate the injurious effect resulting in the administration of this Department from this and subsequent enactments, and to venture to suggest a change.

Appropriations being made for the services of the year, it becomes necessary to start into motion all the vast machinery required for the work intrusted to the Department. Large contracts must be made for transportation, subsistence, building, labor and materials. The rigor of climate in almost all parts of the country, confines the ability to perform outdoor labor with economy and success to the months between the last of April and the 1st of December. In other words, the working season lasts but seven or eight months. The waters of the West and Northwest are closed to navigation from October until the Spring rise. The Missouri River, particularly, is not navigable before May or after October. Large amounts of military freight are carried upon these rivers. Building operations are also limited to the same period. It is, therefore, natural to suppose that, in a business point of view all contracts for the purpose alluded to should be made to cover the whole working season. But what is the effect of the legislation in regard to the fiscal year? A reference to recent legislation is peculiarly necessary.

The fifth section of the act approved July 12, 1870 (chapter 251,) provides "That all balances of appropriations contained in the annual appropriation bills and made specifically for the service of any fiscal year, and remaining unexpended, at the expiration of such fiscal year, shall be applied only to the payment of expenses properly incurred during that year, or to the fulfillment of contracts properly made within that year."

The ending of one fiscal year and the beginning of another will be seen to occur nearly in the middle of the working year, dividing it in two.

The effect of this statute is to confine all contracts within the period of the fiscal year and no longer, and if continuous work or labor is required, or supplies to be furnished through the working season, a new contract must be made to commence July 1, thus breaking the working year in two without any reason or good result.

Again, the seventh section of the same act provides "That it shall not be lawful for any Department of the Government to expend in any one fiscal year any sum in excess of appropriations made by Congress for that fiscal year, or to involve the Government in any contract for the future payment of money in excess of such appropriations."

This adds to the injurious effect of the fifth section already adverted to, because as the appropriations, at least in the long session, are not made until near its end, and as it is forbidden to make a new contract to cover the new fiscal year until an appropriation is made, the Department usually finds itself in the awkward position of being a month or more without funds, in the very height of the working season, and compelled to make two contracts where one would suffice, and discontinue work until its appropriation becomes available. Moreover, there appears to be no good reason why a disbursing officer, at a period when his business necessities require his utmost attention, should be compelled to turn in the balance of appropriations left on the 30th of June, to draw out the same money again on the 1st of July, going through all the formalities of a useless circumlocution.

In consideration of these facts, I beg to suggest that the passage of an act to fix the 1st day of May as the beginning of the fiscal year would relieve the Department from the embarrassments which in this connection it now experiences; would afford ample time for the perfection of the appropriation bills in Congress, and give the service the advantage of a full and uninterrupted season of work.

For the better care and protection of subsistence and supplies, the last Congress authorized the selection from sergeants of the line of as many commissary sergeants as the service might require, not to exceed one for each military post, and it is now recommended that a similar provision be made for the

care of quartermasters' property by the passage of an act authorizing the selection of post-quartermaster sergeants. These sergeants would perform duties now undertaken by hired civilians, and would cost less to the Government than the latter, while at the same time the Government would derive all the advantage of their experience, as well as being able to control them by military authority and discipline.

Attention is called to the expediency of granting to the officers of the line detailed to act as assistant quartermasters, and to disburse money and be responsible for property, a monthly allowance such as is paid to officers who act as assistant commissaries. The responsibility of many of these officers is greatly increased by such detail; they are exposed to loss from unfaithfulness of the men whom they are obliged to trust with property, and some compensation is due for this risk and responsibility. The duties are important, and it should be made an object to the more intelligent young officers to seek them. At present officers knowing the risk and the labor involved, with no special recompense, too often avoid them.

The United States holds no public lands reserved for military sites in the State of Texas, hence the posts needed for the defence of the settlers against the savages have, in almost all cases, been located and constructed on lands which have, since their occupation by the troops, been entered by speculators in State lands.

The owners press for purchase, and only lease for heavy rents. The buildings erected to shelter the garrisons, though rude and temporary in character, have cost large sums of money, and they are liable to be lost to the United States for the want of title to the sites. The act of 17th March, 1873, (17 Statutes, page 614,) was passed to provide a remedy for this state of things by purchase of suitable sites. Under its provisions a board of officers has examined into all the cases of importance. Its report was in accordance with the law transmitted to Congress on the 20th May, 1874, and printed in Ex. Doc. 230. An appropriation of \$106,360 was asked for to settle these titles, but no action was had at the last session. It is very important that this appropriation be made at the earliest day, and that the United States be relieved from its present position of a trespasser on the private property of its citizens in Texas.

In general the railroad transportation for the Army has been satisfactorily performed, but complaints arise as to the conduct of some of the land-grant roads. Congress at its last session forbade any payment to be made to such roads for the transportation of property or troops, or of officers of the Army on duty. Previously these roads had been paid a portion of the cost of transportation, and as a consequence of the recent law some of them have very largely increased their rates of transportation for Government freight; others decline to make any collections on account of connecting roads which are not land-grant, while those not land-grant decline to collect for those which are; others, while not declining to transport Government freight, refuse to load it on their cars, virtually leaving the quartermaster without means of shipment; and nearly all of them give private freight preference over Government freight, thereby delaying the shipments of the supplies for the Army. The effect of the legislation, then, seems to be, that while it saves to the Treasury direct disbursement of public funds, it indirectly, in present shipments, is the reverse of economical, and will add to the burden of claims which these roads will eventually press the Government to pay. A kindred annoyance lies in the operation of the same act in connection with the transportation of officers when travelling on duty. The act forbids any payment to such road in this class of cases; and officers must first find a quartermaster, from whom to obtain a certificate of transportation, and are compelled to go through an inspection as to their identity by the railroad conductor. Much complaint also exists as to the inequality of the allowance for actual travelling expenses only, as there are many expenses incident and necessary to a journey that cannot be reimbursed. Long experience had demonstrated the wisdom and economy of the old laws and regulations upon this subject, which allowed the officer the choice of mileage or actual travelling expenses; and I recommend that that choice be restored by legislative enactment.

On the 30th of June, 1873, there remained due and unpaid on account of principal, interest, and expenses of indebted railroads in the South and Southwest, \$4,658,924.07. During the fiscal year interest has accrued and expenses have been incurred on these accounts to the amount of \$98,479.77. Payments in cash and in transportation and postal earnings have been collected to the amount of \$116,790.91. Under the act of 8d March, 1871, compromise has been made with certain roads whose debt was \$2,699,470.60. These compromises were made as provided in the law, under the advice of counsel of the United States in the suits pending against the roads to recover the sums due by them. The sum to be paid at the office of the assistant treasurer of the United States in New York ultimately is \$1,265,000. The total collections on account of these sales have been, from the origin of the account, \$5,240,423.84. Thirty-four roads have paid off their debt in full; sixteen still remain indebted to the United States.

The new uniform having been made and distributed to the Army has given general satisfaction with the exception of the plaited blouse.

The line of military telegraph from San Diego, Cal., to Prescott and Tucson, Ariz., provided for by the act of 1873, which appropriated, upon an estimate of this Department, \$50,311.80 for its construction, was built by labor of troops, using the means of transportation of the Quartermaster's Department. The appropriation became available on the 1st of July; the line was completed and in operation on the 2d of December, 1873. The line is five hundred and forty miles long, and cost \$45,000. The balance of the appropriation remains unexpended. As a surplus of wire remained unused on the completion of the line, it was used to extend the telegraph to Camp Verde. By this line, cheaply constructed, the principal posts in Arizona are placed in immediate communication with each other and with the headquarters of the Department of Arizona, of the Military Division of the Pacific, at San Francisco, and with the War Department.

The average cost of operation and maintenance has been \$906 per month. The average revenue from private messages \$757 per month. As the line will hereafter be operated by the Signal Corps, the cost of hiring civilian operators will be saved. An appropriation has been made since the opening of this line for its extension to Camp Verde, and the whole work has, by act of Congress, been transferred to the Signal Corps, which by its training is prepared to manage it.

The cost of the line has already been more than repaid in the saving of expense and loss in the pursuit of savages who have broken out from the reservations and committed depredations. Messages from all points are retransmitted to order and organize the movements of pursuit, and the cost of couriers has been much diminished.

Under the act appropriating a million of dollars for placing head-stones at the graves of soldiers interred in the national military cemeteries contracts have been made for the whole work, which are within the sum appropriated, and the same is now in progress.

There are 76 cemeteries designated as national, in which are interred 139,963 unknown and 162,079 known soldiers. Sixty-eight superintendents are on duty.

The cemetery established at the city of Mexico during the Mexican war having been declared a national military cemetery by act of Congress, and committed to the care of this Department, improvements have been made; its walls, walks, and drains have been put in good order, its lodge extended and improved, and an artesian well has been sunk to supply it with water for irrigation necessary in that climate.

Reports of the graves of soldiers who died during the war and were buried in solitary places continue to come in. All such are removed to the final resting-places provided by the country in the nearest national military cemetery.

It is probable that the head-stones will be put up in all the national cemeteries during the coming year. I deem it very desirable that the permanent improvements at these cemeteries should also be completed as soon as practicable.

These improvements consist of—

First: Durable inclosing walls at the following-named places, viz.:

1. Alexandria, La.; 2. Andersonville, Ga.; 3. Baton Rouge, La.; 4. Beaufort, S. C.; 5. Brownsville, Texas; 6. Florence, S. C.; 7. Fort Gibson, Indian Ter.; 8. Fort McPherson, Nebr.; 9. Glendale, Va.; 10. Grafton, W. Va.; 11. Popular Grove, Va.; 12. Seven Pines, Va.; 13. Wilmington, N. C.; 14. Yorktown, Va.

The cost of these walls is estimated at the sum of \$129,000.

Second: Superintendents' lodges at the following-named cemeteries, viz.:

1. Alexandria, La.; 2. Baton Rouge, La.; 3. Beverly, N. J.; 4. Camp Nelson, Ky.; 5. Fort Gibson, Indian Ter.; 6. Fort Donelson, Tenn.; 7. Fort McPherson, Nebr.; 8. Grafton, W. Va.; 9. Lebanon, Ky.; 10. Logan's Cross-Roads, Ky.; 11. Pittsburgh Landing, Tenn.; 12. Chalmette, La.

The cost of these lodges is estimated at the sum of \$56,000, making a total of \$185,000 which I recommend to be made as "a permanent or indefinite" appropriation, in order that the work may be prosecuted to the best advantage to the public service.

SUBSISTENCE DEPARTMENT.

I invite attention to the recommendations of the Commissary-General in regard to the selection of enlisted men as commissary-sergeants; the sale of subsistence stores to officers; the exemption of subsistence supplies from the operation of the act requiring the proceeds of sales to be covered into the Treasury, and the necessity for making a large part of the appropriations for subsistence available prior to the first day of the fiscal year, in order to take advantage of the opening of the shipping season. The law now authorizes the selection of commissary-sergeants from non-commissioned officers only; but no good reason is perceived for not taking advantage of the skill and experience of private soldiers, and it is therefore recommended that they also be made eligible to promotion to the grade referred to.

I have several times adverted to the requirements of the act of May 8, 1872, that all proceeds of sales of public property must be covered into the Treasury as

miscellaneous receipts. This law operates with peculiar detriment to the Subsistence Department. Subsistence supplies, as is well known, are extremely perishable, and in case of their damage or decay must be either thrown away or sold. If sold, the money cannot be used to procure new supplies in their stead, but must go into the Treasury and become unavailable. This is also the case when sales are made when posts are abandoned; when made to employes, to starving Indians or emigrants, or to railroad and land surveying parties; and the effect is that the subsistence appropriation is diminished by precisely the amount of these sales. Necessity requiring new purchases in their stead to meet the wants of the Army, the Department finds itself with an appropriation proportionately inadequate. It is plain that, could the money derived from new sales be applied to new purchases, no increase of appropriation would be made, but only the original amount given by Congress be used. For these reasons I concur in the recommendation of the Commissary-General that so much of section 5 of the act of May 8, 1872, as applies to any property, funds, or appropriation under the control of the Subsistence Department be repealed. In regard to the necessity of authorizing a part of the appropriation for subsistence to be expended prior to the beginning of the fiscal year, I refer to the views given in another part of this report respecting a change of the date upon which the fiscal year should commence. A general enactment making the change would of course meet the necessities of this particular case.

By the act entitled "An act to provide for the relief of the persons suffering from the overflow of the Mississippi River," approved April 23, 1874, and the acts supplementary thereto, approved May 13, 1874, and June 23, 1874, and the joint resolution approved May 28, 1874, extending the provisions of those acts to the sufferers from overflow on the Tombigbee, Warrior, and Alabama Rivers, appropriations were made amounting in the aggregate to \$590,000. In compliance with the requirements of the laws making these appropriations, issues of food to the sufferers from overflow on the rivers named were discontinued on the 1st day of September, 1874. The report of Captain Thomas C. Sullivan, commissary of subsistence, United States Army, the officer charged with the duty of purchasing and distributing the food, will be transmitted as soon as prepared.

PAYMASTER-GENERAL'S REPORT.

I call the attention of Congress to the recommendations of the Paymaster-General, as to the increase of the force of his department. The reasons therefor are stated in full in his report. I feel it my duty to express the fear that the scheme of paying the troops by checks, which has been suggested, would not result advantageously. The letter of the Paymaster-General, of 25th March, 1874, contains in full the objections to that proposition.

MEDICAL DEPARTMENT.

Notwithstanding the occurrence of a few cases of yellow fever at Forts Jefferson and Barrancas during the summer of 1873, the Army enjoyed unusual good health during the year.

During the summer of 1873 yellow fever appeared as an epidemic at various cities in the Southern States, assuming at some points a most malignant type, and proving exceedingly fatal, as for example at Memphis, Tenn., and at Shreveport, La. That it did not prevail to a greater extent in the Army must be regarded as being due to the hygienic precautions adopted, and especially to the prompt removal of the troops from those posts at which the disease was introduced from infected localities, or at which its introduction appeared to be imminent.

The data for the descriptive anatomical catalogue have been perfected. The publication of this work, recommended by the Secretary of War and by the House of Representatives, was not acted upon by the Senate. The materials are so arranged that the work can be speedily completed when authority to print is granted, and I would respectfully renew the recommendation made in my previous annual reports, that authority be given to publish one thousand copies of the work.

Legislation is necessary to authorize the Congressional Printer to publish an additional edition of 5,000 complete copies of the Medical and Surgical History of the War, and this I recommend.

In accordance with the joint resolution of Congress, approved March 25, 1874, Assistant Surgeon Ely McClellan, United States Army, was detailed to inquire into and report upon the causes of epidemic cholera, and was instructed to visit the towns and localities in the United States at which cholera prevailed during the year 1873. His report is now in course of preparation.

In the re-organization of the force of the Surgeon-General's Office, by the last legislative appropriation act, no provision was made for the continued employment of the chemist and his assistant. Work has, therefore, had to be suspended in the laboratory, thus depriving the Department of the protection and advantage of careful and reliable analysis of drugs and medicines, and making it impossible to furnish, as heretofore, other Departments of the Government with results of examinations for detection of adulterations or establishment of values for guidance in selection and purchase.

The act organizing the staff corps of the Army, approved June 23, 1874, while allowing appointments of assistant surgeons in the Army, cuts off two of the five lieutenant-colonels and ten of the sixty majors in the Medical Department, thus preventing any promotion for several years to come. This places the officers of the Medical Corps below those of all the other staff corps and of the line of the Army as regards promotion, which is felt by them as a hardship and injustice, the results of which cannot fail to be injurious to the best interests of the service.

The clause of the same act which specifies that "the number of contract-surgeons shall be limited to seventy-five, and thereafter no more shall be employed," must result either in actual suffering for want of medical attendance or in largely increased expense to the Government. The number of candidates presenting themselves before the examining boards for the position of assistant surgeon is not large, and probably not more than twenty-five will pass the examination by the 1st of January, to take the place of over one hundred contract-surgeons to be discharged under the above law. The only resource will be to employ local physicians, which past experience has shown will cost much more and be less satisfactory than the present system.

At date of last report there existed sixty-four vacancies in the Mediterranean Corps, viz.: two assistant medical purveyors, five surgeons, fifty-six assistant surgeons, and one medical store-keeper.

During the past year three surgeons and one surgeon (retired) have died, and one surgeon has resigned; the vacancies in the grade of assistant medical purveyor, surgeon, and medical store-keeper, were abolished by act of Congress approved June 23, 1874, leaving at present fifty-six vacancies in the grade of assistant surgeon.

ENGINEER DEPARTMENT.

Under the Chief of Engineers the works for the defence of the coast have been prosecuted with vigor and as rapidly as the appropriations in hand would permit, and in several of our important harbors some of the larger works are approaching completion. Generally, the works are modifications of existing defences, constructed for less powerful armaments than those now used. The rapid advances that have been made in power of modern ordnance, renders it essential that these works should be pushed forward to completion and properly armed.

The Battalion of Engineers, in its construction, drill and efficiency for service, has been kept to the high standard requisite for this arm of service. Stationed at Willet's Point and West Point, they have principally been employed in the trials and developments of our torpedo system, and in the instruction of cadets, while small detachments have assisted the officers engaged in western explorations. The appropriations asked for its service are recommended to Congress.

The trial with torpedoes, which for some years past have been going on at Willet's Point, have developed a system inferior, it is believed, to none in use abroad, which will furnish us at small cost with the means of barring our harbors against the inroads of iron-clad vessels, furnishing us with one form of obstruction for holding them under the fire of our guns. The importance of this class of defences is so obvious that the necessity for making the appropriations asked for the collection of such materials as cannot be obtained speedily need not be urged upon Congress.

Satisfactory progress has been made upon the works for the improvement of rivers and harbors, and the surveys and examinations connected therewith, in accordance with the provisions of the river and harbor appropriation act approved March 17, 1873.

The report upon the practicability of bridging, consistently with the interests of navigation, the channel between Lake Huron and Lake Erie, required by the third section of this act, was submitted during the last session of Congress, and printed, forming Executive Document No. 84, House of Representatives, Forty-third Congress, first session.

The provisions of the second and third sections of the act approved May 11, 1874, "providing for the payment of the bonds of the Louisville and Portland Canal Company," so far as relates to the transfer of all the property of said company to the United States, have been complied with. This transfer of the canal was made on the 10th day of June, 1874, from which date the reduction of tolls took effect. The requirements of the act regarding the rate of tolls for the year 1875 will be complied with as soon after the close of the present calendar year as practicable, when a special report will be submitted setting forth the receipts and expenditures during the period of reduced tolls, i. e., from June 10 to December 31, 1874, and the condition of the canal at the close of the year.

In compliance with the provisions of the act approved June 23, 1874, authorizing the construction of a substantial iron and masonry bridge and of a causeway across the Anacostia, or Eastern Branch of the Potomac River, at or near the site of the present Navy-yard bridge, a contract has been entered into with responsible parties for the construction and completion of the said bridge.

An act approved June 23, 1874, provided for the appointment of a commission of engineers to investigate a permanent plan for the reclamation of the alluvial basin of the Mississippi River subject to inundation. The commission has been organized, and the members are now engaged upon the investigation and collection of the data necessary to the preparation of a full report.

The amounts appropriated by the river and harbor act of June 23, 1874, are applied to the specific objects therein designated. Detailed information in regard to the condition of each work of improvement, and the progress made in the surveys provided for in the act, may be found in the report of the Chief of Engineers.

The surveys upon which to base estimates for the improvements recommended by the Senate Select Committee on Transportation Routes to the Seaboard, including that for the extension of the Chesapeake and Ohio Canal, are now in progress.

The board of engineers provided for in the third section of the act has been organized, and the members are now engaged upon the investigations, examinations, and surveys necessary to the preparation of a report upon the best method of obtaining and maintaining a depth of water sufficient for commercial and

military purposes, either by canal from the Mississippi River to the waters of the Gulf of Mexico or by deepening one or more of the natural outlets of the river.

The survey of the lakes has been carried on during the year with its accustomed energy and success. The connection of the triangulation of Lakes Superior and Michigan, the in-shore and off-shore hydrography and topography, have been finished; the Wisconsin triangulation has been carried southward to the vicinity of Chicago, and the Keweenaw base has been measured. The surveys of the Detroit River and river Saint Lawrence from the forty-fifth parallel have been completed, and a map of the lower half of the former has been published; the determination of several points in the interior of Michigan has been made in aid of surveys by the State; the survey of Lake Ontario has been commenced, and much of the field-work has been reduced. The preparation of Chart No. 1 of the Saint Lawrence, of Sandusky Harbor, and of the mouth of the Detroit River, has been completed, and they are now in the hands of the engravers. The need of the vigorous prosecution of this important survey is shown by the number of copies of the various finished charts called for now, from five to six thousand copies a year, and by the constant demand for charts not yet completed. It has been stated that a single survey made last year, viz., the survey of the mouth of the Detroit River, will save from \$50,000 to \$100,000 to commerce this year.

The labors of the party engaged on the geological exploration of the fortieth parallel have been mainly directed during the last year to the preparation of the report and accompanying illustrations. The topographical maps, all of which have been completed, have been put into the hands of an engraver, and the preliminary work for the report, consisting of chemical paleontological, and microscopic studies, has been carried on with success.

Microscopic researches are also being made with a promise of identifying American rocks with well-known types in Europe. It is confidently expected that the reports of this important survey will be brought to a close within the present fiscal year.

The geographical surveys and explorations west of the one hundredth meridian in California, Nevada, Utah, Arizona, Colorado, New Mexico, Wyoming, and Montana, have been carried on successfully since my last report. At the commencement of the fiscal year the three main parties engaged in this work had left their rendezvous at Salt Lake, Utah, Denver, Colorado, and Santa Fé, New Mexico. They moved south into Arizona, connecting with the work of former years, and covering during the surveying season about 75,000 square miles of territory. In addition to its topographical work proper, the survey embraced the fixing of many points astronomically, and investigations in geology, mineralogy, natural history, and the natural resources of the country traversed. It is expected that a large part of the results of this survey will be ready for the press during the coming year.

The officers of the Corps of Engineers who have been attached to the headquarters of the military divisions and departments into which the United States is divided have been engaged during the past year in reconnaissances and explorations, in the collection of geographical and topographical information required by their commanding generals and for the compilation of the map engraved and distributed by the Engineer Department. Facilities have been furnished through these officers to most of the interior posts for the plotting of the routes of scouting and other military journeys, and an increased interest appears to have been taken by the officers and men in adding to our present knowledge of the interior of the continent, as is evidenced by the fact that in one of the departments—the Department of Missouri—23,000 miles have been covered by the military journals and sketches during the last year, while in the preceding year there were but 9,000 miles recorded in the department. Among the more important results during the last year may be mentioned the discovery of a new wagon-route from the line of the Union Pacific Railway to the Yellowstone Park and Montana; a reconnaissance in the country of the Ute tribe of Indians; the construction of a wagon-road from Santa Fé to Taos, New Mexico, and a survey of the Black Hills of Dakota by the engineer officer attached to the military expedition which was sent into that interesting country during the summer of 1874.

The commission of two engineer officers and one coast survey officer, organized under the act of Congress approved March 3, 1873, for the purpose of examining and reporting upon a system of irrigation of the San Joaquin, Tulare, and Sacramento Valleys, have completed their investigations and have made their report, the principal points of which are referred to in the report of the Chief of Engineers.

The estimates of the Chief of Engineers are submitted separately, as presented by that officer, viz.:

Fortifications and other works of defence.....	\$2,108,700
Public buildings and grounds, and Washington aqueduct.....	678,410 50
Surveys.....	399,000 00
Engineer depot at Willet's Point, New York.....	9,000 00
Office expenses.....	35,000 00
Improvement of rivers and harbors.....	12,970,500 00
Total.....	16,300,610 50

ORDNANCE DEPARTMENT.

At the different arsenals, the operations during the year have been chiefly the erection of public buildings at the Benicia and Rock Island Arsenals, under specific appropriations; the care and preservation of the different arsenals, and of the ordnance and ordnance stores thereat; the manufacture of small-arms, ammunition, and other ordnance stores and supplies; the preparation of experimental cannon, and the supplying the Regular Army, the Marine Corps, and the whole body of the militia with arms, ammunition, and materials.

The adoption of the Springfield breech-loading system by a board of officers convened under congressional enactment, and its subsequent establishment by law as the only system to be used in the manufacture of arms, enables the Department to continue the manufacture upon a secure basis, and provide an arm with no superior, that may probably not be superseded by any more perfect invention for many years to come.

The production of rifles and carbines upon the adopted plan has been pushed forward at the National Armory with energy and success, and the new arms issued to the troops will no doubt give great satisfaction. Their issue has been retarded by the lack of ammunition, the small appropriation not supplying the number of cartridges per man deemed indispensable by the commanding generals of departments.

That the troops might be trained to more accurate firing, orders have been issued by the Department authorizing the annual issue of 120 ball-cartridges per man, being ten per month for each man. This certainly does not appear to be too much, but when a calculation is made of the number and the cost, it is found that this limited issue will require 3,000,000 cartridges, which would absorb the whole of the appropriation of \$75,000 for the manufacture of metallic ammunition for the fiscal year. It is evident, therefore, that a larger appropriation for this purpose should be made, and I trust the matter will receive the favorable consideration of Congress.

The appropriation of \$100,000 made by Congress at its last session for the manufacture of arms, had to be supplemented from the permanent appropriation for "arming and equipping the militia," in order to work economically, to keep the cost of the arms within proper limits, and enable the Department to supply the wants of the Army and militia. Not less than half a million of dollars should be annually expended at the National Armory, not only as a measure of economy in producing the best arm for the least money, but in the interest of the country to make a gradual but sure accumulation of the best weapons as a reserve in case of war. In again urging this important matter upon the attention of Congress, I am actuated solely by a sense of public duty, and an earnest desire to have the nation brought to a keen realization of the necessities of the country and the gravity of the subject, and do not hesitate to express my decided conviction that a liberal expenditure at present will prove to be the greatest economy in the future. Every nation that aspires to the dignity of a first-class power has cast aside its obsolete muzzle-loading arms, and at immense cost has been and is providing the newest and most approved models by hundreds of thousands. The sudden occurrences that end in war, and the startling rapidity with which wars are waged and terminated, demand complete preparation in time of peace. With us the want of a large standing Army can only be compensated by keeping on hand, ready for any emergency, a complete supply of every description of war material. Arms and ammunition are of the first importance when an army is to be improvised, and the country should place its dependence at such a juncture on the reserve supplies stored in its arsenals. Certainly not less than half a million of the best arms should be manufactured as rapidly as the monetary condition of the country will permit. The experience of the past is the surest and safest guide in making preparation for the future.

An increase in the annual appropriation for arming and equipping the whole body of the militia is again brought to the attention of Congress, with the hope of some legislation thereon. Not only should the appropriation be largely increased to meet the wants of our ever-growing population, but some legislative action should be taken to relieve many of the States and Territories from charges for arms issued to them during the rebellion, and which should not in fairness have been so charged. This subject has been so often referred to in previous reports, and so largely dwelt upon, that a more extended reference to it at this time is deemed unnecessary.

In October, 1873, consideration was given to the necessity of changes that should be made in the horse-equipments, accoutrements, tools, and materials for cavalry service in the field, and the determination of a standard table of supply. A board of cavalry officers was appointed, to give the Department the benefit of its knowledge and experience. Its report is appended to that of the Chief of Ordnance.

The recommendations, when executed, will undoubtedly add greatly to the efficiency of the cavalry service, and every detail will be carefully carried out as fast as funds will permit, and with due regard to the utilization of the stock on hand.

For several years past I have directed attention to the large number of arsenals east of the Mississippi River scattered through the country, the consequent lack of concentration of work in the interest of economy and perfection of product, and the undoubted necessity of disposing of several of these national establishments, and the building up of a grand arsenal on the Atlantic seaboard. In order to facilitate intelligent action on the subject, by the collection of all necessary data for the information of the Department and of Congress, a board of ordnance officers was appointed some months since, to make a comprehensive and exhaustive study of the subject, and also of the question of a proper location for a powder-depot and of an experimental ground for the testing of heavy ordnance. After several months of patient and careful investigation the board has made its report, which is herewith transmitted. It strongly recommends the retention of the Springfield Armory and the Frankford Arsenal, and the establishment of a grand arsenal in the vicinity of New York City for manufacturing purposes; retaining also the Indianapolis Arsenal, Indiana; Kennebec Arsenal, Maine; Fortress Monroe Arsenal, Virginia, and Augusta Arsenal, Georgia, as places for storage and repair. It recommends the sale

of the Allegheny, Columbus, Detroit, Pikesville, Watervliet, Watertown, and Washington Arsenals, the sales to be made as rapidly as circumstances may permit, the proceeds to be devoted to the purchase of a site and the erection of buildings for the grand arsenal. I heartily concur in these recommendations, and invoke favorable consideration on the part of Congress. Some such definite policy must be inaugurated and steadily pursued. That such establishments demand the fostering care of the country calls for no argument, and that the number of our arsenals must be reduced seems to be the conclusion reached by Congress in the past two years, judging from the very small appropriations made for their care and preservation—appropriations not sufficient to keep the buildings from running to decay. These seemingly large reductions by sale will, when accomplished, leave thirteen arsenals and the armory; a number amply sufficient, when liberally sustained, to meet all the demands of the nation, and all this can be effected from the sales of arsenals, and without the expenditure of a single dollar out of the national Treasury.

The establishment of a powder-depot and an experimental ground for heavy cannon are also discussed by the board, and its recommendations are approved. An estimate for these very important and desirable objects has been made, which it is earnestly urged that Congress take favorable action upon. The great-gun problem cannot be solved without continued experiments, considerable expenditure, and all the facilities of a well-appointed experimental and proving ground. The improvements in modern gunnery are as much the result of the hourly demonstrations on the experimental ground as in the success of mechanical manipulation and skill in the workshop, and certainly no exercise of theoretical knowledge and research will avail without the tests of experimental proof.

Much legislation affecting the Ordnance Department, originating in the earlier days of the Republic, and which had in the course of years fallen into disuse, has been revived and incorporated in the Revised Statutes of the United States. Some of it, in matter of detail, is mandatory in its language, and, being interwoven with more recent legislation, based on the constantly-changing exigencies of service, renders the execution of the letter of the law incompatible with the best interests of the service.

It is not presumed that Congress intended to revive what may be considered obsolete details, but such is the effect of some of the enactments in the Revised Statutes, and I would therefore suggest that, as far as it affects the Ordnance Department, the subject receive the attention of Congress.

BUREAU OF MILITARY JUSTICE.

At the last session of Congress a bill to confer jurisdiction upon military tribunals over military persons charged with murder or other felonies was submitted to Congress. It passed the House, but failed in the Senate. In the case which was the immediate inducement to that application for legislation a soldier had gone to the camp of Indians living on a Government reservation in California, and had there wondrously shot dead one of them as he lay asleep in his tent. The Bureau of Military Justice decided that a court-martial had no jurisdiction, and earnest applications to the civil authorities of the proper county failed to secure the indictment of the murderer. A recurrence of a like crime under similar circumstances, with the same impunity, might at some time, by provoking natural retaliation, involve the Government in a costly and unnecessary war.

It seems to me that some remedial law could be devised containing such safeguards for subordination to civil authority as would relieve the public mind of the jealousy of military power, which is apparently the obstacle to an enlargement of the jurisdiction of military tribunals. As courts-martial have now the power to impose the death penalty for the military crimes of a soldier striking his superior officer while in the execution of his office, why should they not be authorized to impose such a punishment for the murder of a comrade, or a defenseless Indian, or a frontiersman?

SIGNAL-OFFICE.

The regular instruction in military signaling and telegraphy, meteorology, and the signal-service duties at stations of observation, together with the drills of the signal soldiers with arms, has continued at the school of instruction and practice at Fort Whipple, Virginia. The course of instruction and practice is intended to furnish a force of selected enlisted men at once disciplined as soldiers, and fitted by special instruction for the different duties of the signal-service. Working-parties have been organized at the last named for the construction of the telegraphic lines of the sea-coast service and on the frontier.

The act approved June 16, 1874, maintaining the signal-service at a force providing for 150 sergeants and 30 corporals, and privates in the proportion of two for each sergeant, has been productive of good results. The men who have enlisted under it are of superior quality.

During the year 23 stations of observation have been added to those from which reports are deemed necessary to enable proper warnings to be given of the approach and force of storms and of other meteoric changes for the benefit of agricultural and commercial interests.

The daily exchange of telegraphic reports with the Dominion of Canada has been maintained, and warnings of threatened danger have been regularly sent, to be displayed at the ports of the Dominion.

A series of daily telegraphic reports has been received from stations in the West Indies, extending from Cuba, by Jamaica, to Barbadoes and the Windward Islands. The most eastern station thus estab-

lished, and in the course of possible cyclones, lies 2,300 miles to the southward and eastward of Washington.

The issue of the official deductions had at the office of the Signal-Officer from the reports there received has continued during the year.

A minute examination of these deductions, and a comparison with the meteoric changes afterward occurring within the time and within the district to which each has had reference, has given the average percentage of eighty-four and four-tenths as verified. With a more scrutinizing form of analysis the percentages have improved upon those of the preceding year. The wide diffusion given these reports may be judged from the fact that they appear daily in almost every newspaper published in the United States.

The display of cautionary day and night signals upon the lakes, and at the great ports of the United States, upon the Atlantic and Gulf coasts, has been made systematically on occasions of supposed special danger at forty-two different stations, sea and lake ports, and cities. Of the total number of cautionary signals thus displayed 75 per cent. have been afterward reported as justified. In no case has any great storm swept over the ports of the United States without pre-announcement.

By an arrangement with the Post-Office Department 6,386 printed "farmers' bulletins," on which appear the daily reports of the Signal-Office, have been distributed and displayed in frames, daily, at as many different post-offices in different cities, villages, and hamlets, in different States, for the use of the agricultural population of the country, and they have been so displayed on an average within ten hours from the time they left the Signal-Office in Washington.

The river-reports, giving the average depth of water in the different great rivers of the interior, and notice of dangerous changes for the benefit of river commerce and the population in the vicinity, have been regularly made, telegraphed, bulletined in frames, and published by the press at the different river ports and cities, and in cases of great floods, special river-reports have been issued.

By the great diffusion given the reports of this office through the press, the display of the different office-bulletins and forms of report, the maps and regular publications, it is estimated that the statements based upon the information gathered upon the files of the office and issued for the public use reach daily at least one-third of all the households in the United States.

The publications of the office, the Weekly Weather Chronicle and the Monthly Weather Review, have been regularly issued during the year. A number of valuable charts have been prepared. A single atlas condenses into twelve charts results as to the average courses of movement of areas of disturbance in the United States, derived from the studies of the three thousand three hundred and seventy-five charts, charted at the Signal-Office in the period from March, 1871, to April, 1874.

As in the preceding years, a very considerable number of observations have, at the request of the Department, been taken on vessels at sea to complement the synchronous reports of the service and forwarded. Their utility is evident in the study of storms approaching our coasts, or which endanger vessels sailing from our ports.

At the congress of persons charged with meteorological duties, assembled at Vienna in 1873, a proposition to the effect that it is desirable, with a view to their exchange, that at least one uniform observation of such character as to be suitable for the preparation of synoptic charts be taken and recorded daily and simultaneously throughout the world, was adopted.

Special correspondence had by the Signal-Officer, by authority of the Department, with scientists and chiefs of meteorological services representing the different countries, has resulted in arrangements by which a record of observations to be taken daily, simultaneously with the observations taken throughout the United States and the adjacent islands, is exchanged semi-monthly. These reports are to cover the territorial extent of Algiers, Austria, Belgium, Great Britain, Denmark, France, Germany, Italy, the Netherlands, Portugal, Russia in Europe and Asia, Sweden and Norway, Spain, Switzerland, and Turkey. Requests for similar co-operation are proffered to other nations as rapidly as practicable. The results had from this report are considered of especial importance, combining a co-operation thus already extending around the northern hemisphere, to aid in the solution of questions upon which the United States has entered, and preparing for an exchange of telegraphic reports when that may be deemed advisable. Thus it has been left to the youngest nation to organize and in a great measure perfect a system of weather observations and meteorological studies which will soon encircle half the globe.

The sea-coast service of the signal corps, in connection with the life-saving service, has been continued during the year. Telegraphic lines reaching from Barnegat to Cape May and from Norfolk to Cape Hatteras have been constructed, the stations upon them occupied, and the telegraphic lines operated by the officers and enlisted men of the signal-service. The telegraphic wires connect each station directly with the War Department.

In pursuance of the acts of Congress approved June 3, 1874, and June 23, 1874, authorizing the construction and operation of telegraphic lines in the interior

and upon the frontier, connecting military posts, and for the protection of the population from Indian and other depredations, the construction and operation of the lines has been placed in charge of the signal-service.

The lines in Arizona, already partly constructed, are in process of completion. Arrangements have been made to man the stations already established with enlisted operators. The work upon the lines upon the Texan frontier has been more difficult. Active operations have been commenced upon the section extending from Denison to Forts Sill and Richardson. The detachments serving upon these lines are armed for their own defence and the defence of the works.

These lines are to be constructed and operated by the labor of enlisted men. The use of such lines is recommended as a measure of economy for the Army; permitting the scattered forces upon the frontier to be immediately informed of the incursions of Indians or of predatory bands, and to be moved with intelligent rapidity, and from different points, in pursuit.

The Chief Signal-Officer earnestly recommends a more permanent organization of the signal-service, as necessary now both for the interests of the United States and as simple justice to the officers and men who have served so long and faithfully upon it.

The Department has to acknowledge a cordial and wide-spread co-operation at home and abroad. The systems of observation intrusted to its care by those hitherto charged with them evidence the belief that there will be an effort, at least, to use them wisely. It labors now in a work to which none of the great family of nations are strangers. The uses of the work accomplished, the magnitude of that in the future, have been well appreciated by scientists. There has been wanting neither acknowledgment of services already rendered nor incentive to future effort.

The popular support so long and generously given has been continued. Criticism has been temperate, and willing to be easily satisfied. Legislation has been favorable. To aids like these the advance of the work has been due. There seems no difficulty to be encountered in the future greater than has been already met in the past. The opportunities for rendering a public good have widened as the service has extended.

INSPECTOR-GENERAL'S DEPARTMENT.

Scrutinizing expenditures have, in compliance with law, been made of the accounts of disbursing officers. The necessity, economy, and propriety of the expenditures and their conformity to the laws appropriating the money have been made subjects of special investigation. The funds received and expended, with the balances reported due the United States, have been verified by official statements from the Treasury Department and depositories, and it is gratifying to state that, since the existing inspection system has been put in operation, but three cases of deficiencies or irregularities in the application of funds have occurred, two of which have already been made good to the United States, and it is probable no loss will ultimately result from the other.

Although the ratio of deserters from our Army has materially diminished during the past year, yet the number still continues so great as to make this one of the most serious and perplexing evils we have to encounter in our service, and a remedy is much needed.

I agree with the Inspector-General of the Army in his suggestion that desertion be constituted, by legislative enactment, as a felony, cognizable by our civil courts of criminal jurisdiction, the offenders to be arrested by marshals and deputies, like other criminals; but this jurisdiction to be concurrent with that of military courts.

MILITARY REPORTS.

The report of the General of the Army and of the Division and Department commanders are herewith forwarded. They speak for themselves as to the immense amount of work so promptly, so thoroughly and so gallantly done by the officers and men in the Army. Its discipline has been maintained, and the most laborious duties have been performed to the satisfaction of the country. Some of these reports call attention to the fact that many officers and men have been commended in previous reports for gallantry and good conduct. These officers were recommended for brevets during the previous session of Congress, and their names were accordingly sent to the Senate by the President. The energy exhibited and the gallantry shown by those heretofore named makes it proper for me to call attention to the subject, and to recommend that action be taken thereon.

I agree with the commander of the Department of the Platte that the pay of sergeants should be increased, and recommend that his suggestion in this direction be carried out.

DISMISSAL OF ARMY OFFICERS.

In my judgment the necessity exists for the passage by Congress of a law authorizing the President to drop summarily from the rolls of the Army any officer who has been detected in presenting duplicate vouchers for pay. It is true that this illegal and criminal act is not frequent, but I regret to say that it does occur occasionally, and the offenders have been dismissed from the Army by sentence of court-martial. But it seems to me that even the short delay which arises from the time necessary to convene a court should not be permitted to exist in cases of this kind. It is a crime which, if the duplicate accounts are presented, admits of no doubt; the papers themselves form sufficient testimony. The existence of a court could be avoided, and short, sharp, and decisive action should be taken in the cases of those who are guilty of this grave offence.

LEAVE OF ABSENCE TO ARMY OFFICERS.

On the 8th May, 1874, Congress passed an act providing "that the officers on duty at any point west of a line drawn north and south from Omaha City, and north of a line drawn east and west upon the southern boundary of Arizona, shall be allowed sixty days' leave of absence, without reduction of pay or allowances," under certain provisions therein stated. It is very desirable that the provisions of this act be extended to embrace the Department of Texas; and I recommend to Congress the necessary legislation to accomplish the end in view.

My opinion, expressed in previous reports, has not changed concerning the advisability of discontinuing, as vacancies occur in these grades, the extra lieutenants now authorized by law to serve as regimental quartermasters and adjutants. As a measure of economy it commends itself to the attention of Congress.

PROVISIONS FOR THE SUPPORT OF WIDOWS AND ORPHANS OF ARMY OFFICERS.

Much interest has been taken by many officers of the Army in the passage by Congress of an act providing that

equitable deductions should be made from the monthly pay of officers and deposited to the credit of the Treasury of the United States, to be passed into the general balances of the Treasury, and be known as the "Army mutual survivorship annuity fund." A bill for the protection of widows and orphans of officers of the Army, upon a plan which had been thoroughly matured, was introduced into the House of Representatives at the last session of Congress, and referred to the Military Committee, in whose possession it now is. The views of those eminently qualified to judge of the subject of life insurance have been taken, and they are without exception favorable to this plan. There are many strong reasons why I should recommend it, as I most cordially do, to the favorable consideration of Congress.

MILITARY PRISON.

In accordance with the requirements of the law concerning a military prison I made a personal inspection, in the month of October, of the location therefor at Fort Leavenworth, designated by the act. A suitable and proper site has been selected for the location of a permanent building, should an appropriation therefor be made by Congress. The building referred to in that act, in which quarters were to be made for the accommodation of the prison temporarily, were examined by myself in company with the department commander, and I am satisfied that they can be rendered properly secure for the intended temporary purpose. The establishment of this prison will result in great economy of expenditure, and the valuable results to arise from an institution of the character named cannot be overestimated. It is my purpose, hereafter to submit to Congress estimates for the erection of permanent buildings on the site selected.

MILITARY ACADEMY.

My annual visit to West Point last June was unexpectedly terminated before the graduation of the first class; but it was sufficiently lengthy to satisfy me that, during the previous year, the Corps of Cadets had steadily improved in discipline, and the result of the annual examinations has shown a perceptible increase of proficiency in scholarship.

The academic regulations prepared last year have been stringently enforced since their promulgation, (October 1, 1873,) and have been sufficiently tested to establish their improvement over the old regulations.

Of the 342 cadets allowed by law, 297 are now at the academy, and every exertion is being made to induce the Congressional Representatives in whose districts the vacancies exist to nominate capable candidates at a sufficiently early day to insure their admission next June. The failure of a large percentage of the candidates each year nominated for cadetships is unquestionably owing to the short time they have for preparation, in consequence of the failure of members of Congress to select candidates at the time when requested to do so by the Department. If greater attention were given to such invitations, the appointees would have more time for preparation, and, consequently, would be more likely to pass the academic examination.

It is also believed that if the parents of those nominated, or the candidates themselves, would more generally comply with the suggestion of the Department, always offered in the case of each appointee, that before leaving his place of residence for West Point he should be thoroughly examined by a competent physician, and by a teacher or instructor in good standing, such an examination would reveal any serious physical disqualification, or defective mental preparation, and the candidate probably be spared the expense and trouble of a useless journey and the mortification of rejection.

Under authority of the act approved June 6, 1874, an assistant judge-advocate of the Army was assigned to duty at West Point, as professor of law. Prior to his assignment, instruction in the department of law was conducted by the chaplain, whose duties were very onerous, and were multiplied by those incident to the chair of ethics, which he also filled.

Personal observation enabled the members of the Board of Visitors to speak understandingly in their report of the wants of the academy. Their recommendations concerning the construction of the hospital and of the school-house for the instruction of the children of those employed on the post, are particularly recommended for favorable consideration.

In two previous reports the increase of the Military Academy band has been recommended, and attention is again invited to the subject. It is needless to reiterate the arguments heretofore presented in favor of this recommendation; but it is earnestly hoped that the bill heretofore presented may be passed at the coming session of Congress.

Plans for the erection of a central building for a military museum at West Point will be submitted to Congress during its next session, with the reasons which influence the Department in recommending an appropriation for that purpose.

A thorough examination as to the requirements of the institution, and much reflection on the subject satisfy me that a professorship of rhetoric and English literature should be established without delay to accomplish good results. Should this be arranged, a part of the time now occupied by other studies must be taken. This can readily be done, for I have never been able to understand why the time which might be intelligently devoted to the instruction of the cadets in the rhetoric and literature of our own language—so necessary, so useful, and so appreciated in all positions in life—should be lost and frittered away by attempting to give them a smattering of Spanish.

PUBLICATION OF THE OFFICIAL RECORDS OF THE WAR OF THE REBELLION.

The sum of \$15,000 was included in the appropriation "For sundry civil expenses of the Government," approved June 22, 1874, "to enable the Secretary of War to begin the publication of the official records of the war of the rebellion, both of the Union and confederate armies."

This is a work of no inconsiderable magnitude; it certainly is of great importance and interest. It has been commenced with a determination to spare no pains to make the arrangement of the records simple and complete; at the same time to omit all irrelevant matter. This object will be defeated by too great haste, but, by the economical use of time and labor, a very great advance will be effected within the fiscal year with the sum appropriated. Those unfamiliar with the subject can form no adequate idea of the immense amount of valuable material to be examined and arranged for publication. The estimate for this purpose for the next year is \$15,000, the same as for this year, but I have come to the conclusion, since submitting it, that the appropriation should be much larger. The sum given for the present year will be expended long before its close, and it would serve to facilitate and hasten the completion of the work if a liberal appropriation, in addition to that already made, should be so passed as to become immediately available, without waiting until the new fiscal year begins.

To the clerks of the Department to whom the work is assigned, who have been chosen on account of their comprehensive knowledge of the records and events of the war, much credit is due; and, as a measure of justice to compensate them for their extra labor, I recommend that, when appropriations are made, authority be given to pay them for such extra service an additional sum beyond their salary as clerks.

REGULATIONS.

At the last session of Congress an act was passed by the House

of Representatives authorizing the President to make and publish regulations for the government of the Army in accordance with existing laws. It is of the utmost importance to the Army that this measure shall become a law. The edition of old regulations has for some time been exhausted; and, moreover, they have necessarily been changed by numerous orders. In fact the Department has now a copy of Army Regulations to furnish officers entrusted with important responsibilities, to whom they are essentially necessary.

WM. W. BELKNAP, Secretary of War.

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From the Army and Navy Journal of Jan. 31, 1874.

An enthusiasm for one's business or profession is not only admirable in itself but is the chief element of success, and it is that has given Mr. W. O. Linthicum, of 174 Fifth Avenue, New York, the distinction among tailors which secured for him the patronage of the Duke Alexis, as chief among his class. There is no college of tailors that we know of; if there were one Mr. Linthicum would, we doubt not, be chosen by acclamation to the presidency, or the chief professorship; for he is not only a good tailor himself, but is the cause of good tailoring in others, being the author of original systems for cutting published in book form, the editor of "Linthicum's Journal of New York Fashions," and the publisher of a great variety of patterns for coats, pants, and vests, which are furnished cut to measure or otherwise at a moderate price. Supplied with these officers at a distance from New York can make sure, wherever they are, of having their clothes made according to the most approved New York cut.

"Exposition Universelle de 1867 a Paris Le Jury International decerne une mention honorable a W. O. Linthicum (New York Etats Unis.) Agriculture et Industrie. Groupe IV. Classe 35. Vêtements. Paris, le 1er Juillet 1867. Le Conseiller d'Etat, Commissaire General F. Le Hay, Le Ministre Vice President de la Commission Imperiale de l'Exposition."

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REFERENCES BY SPECIAL AGREEMENT.

General Sherman, U. S. Army, and lady, Washington, D. C.; Admiral David D. Porter, U. S. N., Washington, D. C.; Major-General G. B. Meade, U. S. Army, Philadelphia; General George, Sykes, U. S. Army; Brigadier-General I. N. Palmer, U. S. Army, Omaha, Neb.; Brigadier-General L. P. Graham, U. S. Army, Brigadier-General Wm. M. Graham, U. S. Army; Mrs. Admiral Dahlgren, Washington, D. C.; General S. D. Sturges, U. S. Army.

U. S. ARMY AND NAVY JOURNAL.

NEW YORK, SATURDAY, DECEMBER 12, 1874.

IN the ARMY AND NAVY JOURNAL of November 28 we quoted an article from the Washington Chronicle, purporting to give the proceedings of the committee on appropriations of the House of Representatives upon the estimates for the support of the Marine Corps for the next fiscal year. From this it would appear that there was danger of the abolition of the corps, or its transfer to the Army, and that the committee seriously discussed the propriety of wiping out in the one way or the other, so important a branch of our service. We are warranted in saying that the discussion was nothing more than has taken place annually for years past upon this subject, and arose simply from the fact that the estimates for the corps were based on the number of men allowed by law, and not upon the number appropriated for by

the last Congress. It is stated in the article referred to, that the estimate was submitted by mistake. Be this so or not, it is well known that a failure to appropriate for an office, or for any object authorized by law, does not abolish the office nor dispense with the object. So the failure of Congress to appropriate for only 1,500 marines did not reduce the corps from the number fixed by law. It is customary, and the commandant of the corps was perfectly right to submit estimates to meet the requirements of the corps as authorized by law. Congress might at one session see reason to reduce the appropriations for an object, and increase them for the same at the next. It might appropriate at one session for a reduced number of men, and for the full number at the next. It is proper, therefore, to submit estimates for the full number allowed by law, and leave it to Congress to appropriate as may be thought proper.

It is impossible to understand how the transfer of the corps to the Army, or the assignment of officers and men of the Army to its duties, could save the "appropriation for the Marine Corps to the Government." The members of this corps are paid the same as the Army—the cost, therefore, for the discharge by the Army of the service it performs would be the same. It is still further impossible to see how this appropriation could be materially reduced by abolishing the corps, and assigning its duties to officers and seamen of the Navy. It would take just as many of the latter as the former, and their pay is not less. To abolish the corps on sound principles, it must be agreed that its services are not needed. No one at all who has the least idea of the duty it performs would advance an argument for its abolition. Both ashore and afloat its services are as important as those of the Navy itself. There is scarcely a day that official applications are not made for the increase of the guard at the Navy-yards or stations; and on ships of war the applications are as urgent to maintain the guard to its full complement. Take them from the yards and supply their place by watchmen, and the expense is increased. The one receives from \$13 to \$20 a month, and the other \$50 to \$60. The moment you reduce the marines at shore stations, at the same moment their places must be supplied by watchmen. It is not a sailor's duty to stand guard, and if they should be put at it the number of seamen must be increased on each vessel, and they must have an officer to command them. So in the end, transfer or abolish, the result as to expense is the same, and the efficacy of a corps would be destroyed, which from the organization of the Government to the present time, has a proud record of service in all wars in which the United States have been engaged. We do not believe any Congressman, knowing anything about the corps, entertains the least idea of trying to abolish it.

THE Commissioner of Indian Affairs on the 23d received a letter from Agent Saville reporting that the Indians under his charge have at last submitted to having a census taken of their number. The count shows that there are belonging to the Red Cloud Agency 9,330 Ogallala Sioux and 3,000 Arapahoes and Cheyennes, besides some 900 Ogallalas who are off by permission hunting on the Republican River, and about 1,000 Minneconjous and other Northern Sioux, who ran away from the agency rather than be counted. All these Indians have for years resisted being enumerated, as they entertain a superstitious belief that if counted they would speedily lose some of their number, and they have now, with the exceptions above noted, submitted to a census only under the moral suasion of hunger and bayonets; the agent having positively refused to give them rations on any other terms, and the presence of troops enabling him to maintain this position. Red Cloud's efforts in behalf of the policy of the Government have had the effect of reducing the number of his personal adherents from many thousands to barely five hundred. No trouble is anticipated from the Sioux who have run away.

WE have received from the manufactures a sample of the "Climax Creaser and Loader," and have found it to be a most excellent tool for all using paper shells for breechloading shot guns. For loading the shell and securing the wad by such a simple contrivance as the creasing of the shell by a wheel that runs mathematically true, it is an invaluable tool, while by unscrewing the top you have a perfect cap expeller in the stout needle that there appears. Any of our Army officers who use fowling pieces that load at the breech will find this little tool save time, temper, and profanity in that tedious job, known as reloading shells.

THE NAVY.

The Editor invites for this department of the JOURNAL all facts of interest to the Navy, especially such as relate to the movement of officers or vessels.

VARIOUS NAVAL ITEMS.

THE Gettysburg with *St. Mary's* in tow, left Boston, December 8, from New York.

THE Portsmouth, at Mare Island, is expected to be again ready for sea about the middle of December.

THE Narragansett sailed from the Navy-yard, Mare Island, December 2, on surveying service on Mexican and California coasts.

COMMODORE George H. Cooper will assume command of the Navy-yard, Pensacola, Fla., on the 15th of January next.

COMMANDER S. Livingston Breece will sail in the steamer of the 15th inst., from New York for San Domingo, to take command of the *Ossipee*.

COMMANDER LEWIS, of the *Yantic*, reports officially, the recovery of the body of the late Master R. A. Breck, who was drowned at Amoy, China. The remains were interred in the European Cemetery, on the Island of Kulangien, with all due solemnity and military honors—officers and men from two foreign men-of-war present, Japanese and English, together with foreign consuls, merchants, missionaries, and citizens generally participating in the funeral ceremonies.

The Secretary of the Navy has made the following changes in the regulations of the Naval Academy: The annual examination of all cadets will commence on the 10th of June, instead of the 20th of May. The effect of this is to give the classes more time to get through the course.

The Academic year will begin on the 30th of September, instead of the 1st of October. The effect of this is to shorten the practice cruise, which is considered unnecessarily long, and to give additional time to study at the Academy. The examination of candidates for admission as cadet-midshipmen will take place on the 21st of June, instead of between the 5th and 15th of June, and on the 15th of September, instead of between the 20th and 30th of September.

The examination of candidates for admission as cadet-engineers will take place of the 6th of September, instead of between the 15th and 17th of September, as formerly.

These changes, rendered necessary by the change in commencement of Academic year, will facilitate the examination for admission, as there are ample facilities for conducting it in a day or two, instead of extending it over a week or ten days. When these days fall on Sunday, the examinations will take place on Monday following.

NAVY GAZETTE.

REGULAR NAVAL SERVICE.

ORDERED.

DECEMBER 3.—Lieutenant L. C. Logan, to the Naval Observatory, Washington, D. C., on the 15th inst.

DECEMBER 5.—Lieutenant-Commander Henry F. Pickens, to the Naval Rendezvous, New York, on the 15th inst.

DECEMBER 5.—Master Henry T. Monahan, to the Roanoke, Ensign H. P. McIntosh, to the Monocacy, Asiatic Station, per steamer of 26th inst. from San Francisco, Cal.

DECEMBER 7.—Commander George E. Belknap, to duty on the Coast Survey as hydrographic inspector.

DECEMBER 8.—Lieutenant John T. Sullivan, from the Roanoke, and ordered to special duty in connection with the further survey of the Isthmus of Darien.

DECEMBER 8.—Lieutenant Erwin S. Jacob, to the Navy-yard, Norfolk, on the 14th inst.

DECEMBER 9.—Lieutenant W. O. Sharrer, and Master J. H. C. Coffin, to temporary duty on board the Wachusett, at Norfolk, and, on her arrival at Boston, to return to Washington and resume their duties at the Hydrographic Office.

DECEMBER 9.—Lieutenant John T. Sullivan, from the Roanoke, and ordered to special duty in connection with the further survey of the Isthmus of Darien.

DECEMBER 10.—Lieutenant John T. Sullivan, from the Roanoke, and ordered to special duty in connection with the further survey of the Isthmus of Darien.

DECEMBER 11.—Lieutenant John T. Sullivan, from the Roanoke, and ordered to special duty in connection with the further survey of the Isthmus of Darien.

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DECEMBER 19.—Lieutenant John T. Sullivan, from the Roanoke, and ordered to special duty in connection with the further survey of the Isthmus of Darien.

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DECEMBER 23.—Lieutenant John T. Sullivan, from the Roanoke, and ordered to special duty in connection with the further survey of the Isthmus of Darien.

LEAVE OF ABSENCE GRANTED.

To Passed Assistant Surgeon Chas. L. Cassin for six months from the 9th inst.

LEAVE EXTENDED.

The leave of absence of Commander Wm. Gibson has been extended one year, with permission to remain in Europe.

REVOKED.

The orders of Assistant Engineer A. F. Dixon, to the Ajax, and placed on waiting orders.

LIST OF DEATHS

In the Navy of the United States, which have been reported to the Surgeon-General, for the week ending December 9, 1874:

Clement Doyle, marine, November 9, U. S. steamer Congress. William Cope, gunner, December 7, at Philadelphia.

CHANGES IN THE MARINE CORPS.

The following are the changes in the officers of the Marine Corps since last memoranda, viz.:

Captain Chas. Heyward, on December 1, 1874, ordered to be detached from Brooklyn, N. Y., and to proceed to Norfolk, Va., and report to the commandant of that station, as the officer detailed to command the marines on board the U. S. steamer Brooklyn, now fitting out at that station as flagship of the South Atlantic Squadron.

Second Lieutenant S. H. Gibson, on December 1, 1874, by order of the Hon. Secretary of the Navy dated November 28, 1874, detached from Marine Barracks, Annapolis, Md., and to proceed to New York and take passage per steamer to Europe, and upon his arrival to report to the rear-admiral commanding naval forces European Squadron, as the marine officer detailed to command the guard of the U. S. steamer Congress.

Second Lieutenant Wm. F. Zellin, on November 16, 1874, ordered to be detached from command of the marine guard of the U. S. steamer Congress and proceed to United States and report at headquarters.

Captain N. L. Nokes, on December 1, 1874, ordered, upon being relieved by Captain James Forney as senior marine officer North Atlantic Squadron, to proceed to Washington and report his arrival in person at headquarters.

Captain James Forney, on December 1, 1874, ordered to be detached from Philadelphia, Pa., and to proceed to New Orleans, La., and report to Rear-Admiral J. R. M. Mullany, commanding naval forces North Atlantic Squadron, as the senior marine officer of the squadron, detailed to relieve Captain N. L. Nokes.

Captain Philip R. Fendall, by order of the Hon. Secretary dated December 4, 1874, detached from command of marines at Portsmouth, N. H., from the 10th inst., and will proceed to Lisbon, Portugal, and report by February 3, next, on board U. S. flagship Franklin to the rear-admiral commanding naval forces, European Station, as the fleet marine officer of that squadron, detailed to relieve Captain Geo. W. Collier.

Captain Geo. W. Collier, ordered December 5, 1874, upon being relieved by Captain Philip R. Fendall as fleet marine officer of the European Station, to proceed to the United States and upon his arrival to report in person at headquarters.

Captain James Forney, on December 4, 1875, orders of November 1874, revoked for the present, by order of the Hon. Secretary of the Navy.

Major Geo. K. Graham, on December 7, 1874, ordered to Portsmouth, N. H., and report to the commandant of that station as the officer detailed to command the marines at that post.

NAVY REPORTS.

THE BUREAU OF ORDNANCE.

BUREAU OF ORDNANCE,
NAVY DEPARTMENT, Oct. 30, 1874.

Hon. George M. Robeson, Secretary of the Navy:

SIR: I have the honor to submit the annual report of this bureau with accompanying estimates for the fiscal year ending June 30, 1876.

Besides the ordinary duties of preparing our ships for service, and preserving the public property placed under its charge, the bureau has continued its examination into the various important questions enumerated in its last annual report, and which are briefly discussed in the succeeding paragraphs, each under its respective heading. Additional to these are mentioned the experiments of Mr. Norman Wiard, at Nut Island, resumed during this summer, but not yet completed. At their conclusion, a separate and detailed report will be made to the department.

The most important operations of the bureau occurred during November and December of last year, on the occasion of the seizure of the *Virginian* by a vessel of war of the Spanish navy.

It was deemed advisable to immediately arm and equip every available ship of the Navy, then in the ports of the United States.

The complete and rapid armament of so many ships, including iron-clads and the largest frigates, although a heavy task, was nevertheless successfully performed without the omission of a single important detail. The exertions made were commensurate with the exigencies of the occasion, and involved a large accumulation of stores, nearly all of which, however, are still available for future operations.

RIFLED CANNON.

The organization of our ordnance dates from 1845, and from that period it has been fully recognized in the Navy that our ships should compensate for inferiority of numbers by superior armament of individual ships; and so long as the smooth bore formed the batteries, that superiority was maintained by a limited number of powerful guns.

With the introduction of iron-clads, and the universal adoption of rifled cannon by other powers, we are forced to adopt the same armament, otherwise, we shall, if engaged in war with even a second rate power, find ourselves overmatched, not only in numbers, but power of individual ship. There is, however, no reason why our ships, heretofore superior to all others in armament, shall not be restored to equality.

The bureau therefore recommends the entire rearmament of the Navy, with breech-loading rifled cannon, which can be done at a very small cost, in the present reduced state of number of ships and guns required.

With wooden ships the mere lodgment of a shell in the side before the explosion might inflict a fatal injury; but a gainst armored, or even wooden cased double bottomed ships, complete perforation and explosion of a large charge within is essential.

The present types of foreign armored cruising ships

carry from 4½ to 6 inches of armor, and at present we have no guns except the XV. inch in the monitors, which will seriously injure the lightest of these armored vessels. Substitute a 7 inch or 8 inch for the XI. inch smooth bore, which even our smallest ships carry, and few of them would come off without great damage.

The sphere of offence of the monitors does not extend beyond 500 yards, which might be increased to 3,500 yards, by the substitution of an efficient rifle of the same weight of 10 inch or 11 inch calibre, for the XV. inch smooth bore.

WIARD'S EXPERIMENTS.

The experiments of Mr. Norman Wiard on the conversion of smooth bores to rifled cannon on his system commenced last autumn, and since continued under the nominal supervision of this bureau, have not developed any new or unexpected results. A single shot was fired from each of two XV. inch guns of the Army pattern—one in its original state with round shot of 450 pounds weight, and a charge of 140 pounds of powder, the other rifled on Mr. Wiard's plan, with a pointed shot of the same weight, and same charge of powder at similar targets composed of five 3 inch plates set up at a distance of 160 feet. The first broke up the plates; the second penetrated them. A few fires for comparative ranges were then made, and the experiments suspended. The recoil, as was to be expected with a charge nearly treble that for which the gun was designed, was such, (twenty-four feet), as to be entirely uncontrollable in the turret of a monitor, or indeed anywhere in service. This element, it is essential to consider, for, notwithstanding the improvements in powder, which are equivalent to an increased strength in the gun, the weight of the gun is designed for a fifty-pound charge.

It would appear to those unacquainted with artillery practice, that a great result had been obtained, but a comparison with other experiments will show that nothing new has been developed. Whitworth has fired a IX. inch shell of 404 pounds, propelled by fifty pounds of powder through three 5 inch plates, interlaminated with two; 5 inch layers of iron concrete, (made of iron turnings and lead), the whole forming a mass 25 inches thick. An equal result has been produced by the English 10 inch gun, firing a 400 pound shell with seventy pounds of powder, at a distance of 1,000 yards; and by the Krupp, twenty-six centimetre, firing fifty-seven pounds of powder and 415 pounds shot. Thus showing that with well proportioned guns, projectiles and charges, the disproportionate and dangerous charges of Mr. Wiard are useless.

The experiments were resumed in September of this year, and at the thirteenth fire with heavy charges and at the distant target the rifled gun burst, the target not having been hit. This result I anticipated, and do not hesitate to declare that it is impossible to convert a cast iron smooth bore into an efficient rifle by any system of rifling.

Since this draft was prepared, the bureau has received a report of the burst, at the first fire, of a second XV. inch gun, Navy pattern, rifled on Mr. Wiard's plan, firing a charge of 180 pounds, and a sub calibered shot of 493 pounds, aimed at a 30 inch target.

No person in the least acquainted with ordnance, could hope to fire half a dozen such charges; therefore, even if successful in a single fire, no useful result was to be expected from the experiment.

The principal advantage of rifled projectiles consists in their greater penetration due to the concentration of effect on a smaller and better form of surface—next in greater content of explosive; for same calibre, then range, and lastly accuracy.

Since the weight of the gun is fixed by the construction of the vessel, and the recoil cannot exceed certain well defined limits, the conditions of calibre of gun, length of bore, weight of projectile and charge of powder, are also fixed within close limits, and cannot be departed from without a loss of effect.

For these reasons, neither the XV. inch nor XI. inch Navy guns can be converted into efficient rifles, on any plan, even by reducing and lining the bore. They are too short to properly utilize a proportionate charge of suitable powder, nor can they be converted to breech-loaders, which the bureau considers the essential feature of any rifled system.

POWDER.

The experiments on the improvement of powder have been prosecuted as far as limited means will permit, and the general questions of manufacture settled.

Our stock of gunpowder had been allowed to fall quite low during the prosecution of these experiments, and last autumn a quantity was ordered necessarily at a most unfavorable season. Fortunately, circumstances did not require immediate delivery, as the difficulties of manufacturing uniform powder in winter are very great. The bureau submits the propriety of an appropriation for gradual increase of our stock.

BREECH-LOADING HOWITZERS.

The subject of increased efficiency of our boat and field artillery has attracted the earnest attention of the bureau which has prepared model guns of two classes, a light howitzer of 350 pounds, adapted to all boats, even the smallest, and a heavier one of 500 pounds, firing the same projectile with different charges.

They are on two systems, one a wedge breech on the plan of Mr. B. B. Hotchkiss, the other a slotted screw. Both use metallic cartridges which, in the opinion of the bureau, is the best plan, and overcomes several objections to breech-loaders. The latter, can, however, use the common cartridge bag. They are mounted on carriages which give 30 deg. elevation, 45 deg. depression, the latter condition being very useful as a defence against torpedo boats. The model guns are completed in bronze, but the construction is

stopped for want of funds, and because suitable steel blocks cannot be supplied by any of our steel manufacturers.

GATLING GUNS.

Fifty of the small Gatling guns have been purchased, a suitable carriage devised, and they are now ready for issue to the service. This gun, too, has been arranged to fire down at great depression, a very important condition for a gun designed to be used in the tops, and for firing into boats close alongside. Some difficulties relative to feeding in this position, remain to be overcome.

TORPEDO STATION.

The general character of the instruction at this station is given in the accompanying report of the board detailed to witness the examination of officers under instruction:

During the past year it has supplied complete outfits of torpedoes and electrical apparatus to all our cruising ships, and the mechanical facilities of the station are sufficient for any probable future exigency. The assembly of ships at Key West afforded opportunity for extensive practice, developing defects of our system, and causing remedies to be applied. Frequent reports are made to the bureau from cruising ships of the efficiency of the apparatus now supplied.

The course of instruction was interrupted last autumn by the detachment for sea service of most of the class before the completion of the course. In ordering a new class it was deemed advisable to utilize more of the favorable season for experimental practice. This has resulted in marked benefits. The principal defect observed is, that the majority of the officers ordered for instruction, go there expecting to be taught, not for the purpose of personal investigation, and to learn from the great facilities placed at their disposal. Few have either the aptitude or application necessary for theoretical study. Nor does it appear to be necessary for the majority to take more than a practical course. Those who develop particular aptitude, and those only, should be retained for further instruction during the winter.

It is also necessary that the officers of the station should be relieved of the routine instruction, and allot some time for theoretical and practical investigation, otherwise no progress will be made.

The torpedo school differs from most scientific and practical institutions in that there are no text books, and few points determined by experiment. The whole subject is yet in an indefinite state, and some body of facts must be accumulated, in order to have a subject to teach. The torpedo boats *Intrepid* and *Alarm* have been completed, but owing to the advanced season, fewer experiments have been made with either to determine their capabilities.

The experiments recently made abroad show that little reliance is to be placed on stationary torpedoes for the defence of important harbors. The radius of destructive effect being quite limited, these machines must be very numerous, entailing a complication of cables and great risk of accident and failure. This bureau is therefore of the opinion that for the defence of our large harbors, (such as New York), the aid of the Navy, with monitors as bases for movable torpedoes, and swift torpedo boats, will be required. The movable torpedo, yet in its infancy, is receiving great attention as well as other methods of attacking iron-clad vessels beneath their armor. This new element is, however, attracting the serious attention of all maritime powers, and is destined to play an important part in future naval operations. We are at least as far advanced as others, but I take leave to recommend liberal appropriations for experiments to develop the capabilities of this most important means of offence and defence.

I have the honor to be, etc.,

WILLIAM N. JEFFERS, Chief of Bureau.

TORPEDO STATION,
NEWPORT, R. I., Oct. 23, 1874.

Hon. G. M. Robeson, Secretary of the Navy.

Sir: We have the honor to submit herewith our report of the examination of the graduating class of students attached to this station, which we have witnessed in accordance with the orders of the department. The following are the subjects of examination, viz.: electricity; explosives; fuze making.

The management and use of all kinds of torpedoes under different circumstances, and experiments made with various explosives.

It is very satisfactory to the board to be able to say that these examinations, both in the manner in which they were conducted and in the proficiency of the students, afford the strongest assurance of the competency and fidelity of the instructors, as well as of the zeal and capacity of the students. The board is persuaded that the objects pursued at this station, the course of instruction and discipline, and their special and general results, promise to be of vital importance to the future usefulness and efficiency of the naval service. We have the honor to be, etc.,

C. H. DAVIS, Rear-Admiral and President; A. C. RHIND, Captain; RICH'D W. MEADE, Commander; W. A. KIRKLAND, Commander; CHESTER HATFIELD, Commander.

THE MARINE CORPS.

HEADQUARTERS, MARINE CORPS,
WASHINGTON, D. C., 24th October, 1874.

Hon. Geo. M. Robeson, Secretary of the Navy:

Sir: I have the honor to report to the Department, that at the usual inspections of the corps during the past year, the troops at the several stations were found in excellent order, and their discipline and efficiency all that could be desired. The barracks and other public property under their immediate charge were also found in their usual good condition, and will require nothing during the coming year but the ordinary attention and repairs provided by the annual appropriations to keep them so.

The old ship *St. Lawrence*, so long used as a barracks at Norfolk, having been declared unfit for further use as such, a small temporary building has been erected in the Navy-yard for the accommodation of the men at that station.

The change was a much needed one, as well for the health and comfort of the men, as for their discipline

and military efficiency, for the time and labor necessary to keep a large ship in good order can now be employed in their proper military duties, drill, etc.

Congress at its last session having limited the appropriation for the support of the Marine Corps to 1,500 privates, all recruiting was immediately stopped, and that grade reduced by discharge to the number designated. As the complement of marines on board of vessels in commission still remains the same, this reduction had to be made from the several naval stations on shore. As may be supposed, this has left a very small number of men at each of these stations. A force in my opinion entirely inadequate to perform the duties required of it.

It is hardly necessary for me to say that the complement of marines on board vessels in commission should not, under any circumstances, be reduced below what it is at present, for in the opinion of all our naval commanders the number should be rather increased than diminished. Nor is it necessary for me to call the attention of the Department to what has been so often recommended and urged by all naval commanders, that there should be a larger force of marines at our principal Navy-yards to guard the immense amount of public property stored therein, to furnish well-drilled, effective men for the relief of guards returning from sea, and to be always in readiness for any emergency that could arise requiring the services of troops. It has always been considered that at New York, Boston, Philadelphia and Norfolk, there should at all times be a force of at least 150 men in readiness for immediate service, yet with the corps up to its authorized standard, there is but one of these stations that could furnish 50 efficient troops for active service, while at the Headquarters of the Corps the general depot for the instruction and drill of the young officers and recruits entering the service, scarcely 25 privates can be mustered at an ordinary company drill. It is manifestly impossible with so small a force as this, to impart that military instruction and training so necessary to make a thorough soldier; and I regret that in some instances I am compelled to send new recruits to sea before they can acquire that experience and instruction so desirable to make them good efficient soldiers on board ship. For these and other reasons not necessary to adduce, the late reduction has, in my judgment, operated injuriously to the service.

When we consider the vast amount of public property at our naval stations, the very great importance of having a body of well-disciplined and reliable troops at these important points, in readiness at all times for immediate service with the Navy or Army, or with the municipal or State authorities in any civil commotion where the presence of troops might be necessary, I cannot think that Congress would regard a force of at least 150 men at each of these stations as too great a number for the demands of the service.

I, therefore, would respectfully and urgently recommend that the 500 men discharged in compliance with the desire of Congress may be again enlisted.

The estimates of the disbursing officers of the corps, transmitted to the Department a few weeks ago, have been prepared with this view, and I trust the Department may recommend the desired appropriation to restore to the service the men temporarily disbanded.

The yellow fever has again visited our most southern Navy-yard, and the corps has to regret the loss of one of its most gallant young officers, Lieutenant Wm. B. Slack, and one fifth of the enlisted men of the command. Fortunately, however, there were at the time but three officers and thirty-five enlisted men on duty at the station.

If it be the intention of the Government to maintain this naval station, some provision should be made to rebuild, on its former site, the barracks destroyed during the late rebellion, as the temporary building now used by the marines is, from its structure and location, unsuited for the purpose.

I am, very respectfully, etc.,

J. ZEILIN,
Brigadier-General and Commandant.

TRANSIT OF VENUS EXPEDITION.

U. S. SHIP SWATARA, 3d RATE,
BLUFF HARBOR, NEW ZEALAND,
[October 18, 1874.]

Hon. Geo. M. Robeson, Secretary of the Navy, Washington, D. C.

Sir: I have the honor to inform the department that this vessel under my command, left Cape Town, Cape of Good Hope, on the 17th of August, to continue her voyage. Hog Island and the Twelve Apostles, the Western Islands, of the Crozet Group, were sighted on the 30th of August, in the forenoon. On the afternoon of the same day, a heavy southwest gale came on and the ship was hove to under close reefs and storm sails with her head to the northward and westward. The weather was thick, with squalls of hail and snow, and the sea high. The deck was lumbered with material for building houses at Crozet and Kerguelen Islands, including bricks, cement, nails, etc., and a large quantity of fresh vegetables, besides some coal. Owing to the heavy deck load, the ship took on board some water, but no heavy seas. This mass of material on deck was so securely lashed under the direction of Lieutenant Commander Wright, the executive officer, that nothing broke adrift. These lashings were put on at Cape Town, and renewed from time to time. On the morning of the 31st the gale abated somewhat, and the weather cleared enough for us to sight Possession Island, bearing to the southward, stood for the island under steam and sail, and at 8:30 p. m. anchored on the east side near American Bay, intending to go to Suip Bay at early daylight. At American Bay there is no landing, even in the pleasantest weather, unless in whale or life boats. At 4 a. m. on the 1st of September, a gale came on from the northward, and I had only time to get the anchor and stand off shore, when the ship swung around, her stern was barely a ship's

length from the kelp that grows on the rocks. The gale blew with considerable violence all day, and I stood on and off the land between Possession and East Islands, steaming up to the entrance of Ship Bay and then drifting a couple of miles to leeward. In the afternoon I had a good opportunity of standing close in during a lull, and I found the Bay to be a dangerous spot for a vessel of this draft. There is not swinging room inside the Bay, and the headlands are only two cable length apart. To anchor there with a vessel of eighteen feet draft, she would have to lay at least a mile from the headlands in 20 fathoms water, and exposed to wind and sea all the way from north to south by the eastward. Only small vessels of from ninety to 200 tons hazard an anchorage in the Bay. Captain Raymond, U. S. Army, chief of the Crozet party, hired a carpenter's mate at Cape Town, who has been for some years catching seals on this Island, and has often been in the Bay. He agreed with me that it was dangerous in the extreme for this vessel to go there. I still entertained the hope that another day might develop some better anchorage, and accordingly stood off shore some ten miles and hove to under canvass and banked fires. The limited amount of coal the ship carries gave me some anxiety, but I determined to try another day, if possible. At 9 p. m. a gale sprang up from the northward, which increased in severity until the main try sail and storm mizzen were all the sail the ship needed to lay to under. It blew hard until the morning of the 2nd, when she could bear the close reefed fore and maintopsails and fore-storm stay-sail. The lowest thermometer during the night was 40 deg. and the highest 51 deg., the barometer standing at about 29.16, amount of coal on hand 115 tons, including 25 tons intended for the Crozet and Kerguelen Islands. The night was very thick, with fierce squalls of hail and sleet, making it dangerous to stand very near islands whose positions are not accurately located, and at 8 a. m. of the 2nd our reckoning placed us in lat. 48 min., 50 deg. S., long. 53 min., 20 deg., 37 miles from Possession Island, the wind still blowing hard from the N. E. and northward, I was forced at this time to give up landing the Crozet party. The fires which had not been spread were allowed to go out, and I shaped a course for the Kerguelens. At 7 p. m. the gale increased with such force that I was obliged to heave to again on the port tack with her head to the eastward. At midnight the gale moderated sufficiently to keep the ship off on her course. The wind soon after hauled to the westward and the sea went down. The weather continued pleasant for the rest of the passage to Three Island Harbor, Kerguelen Islands, where we anchored at 5:30 p. m., September 7th. A site for the establishment of the party of observation at Kerguelen was selected at the head of Royal Sound, the ship moved over there and anchored, and the landing of stores and material commenced on the afternoon of Thursday, the 10th, at a point called Freshwater Bay, near Mallay's Point. The wind blows more or less here all the year round, principally from the N. E. to S. W., by the west, I was informed by Captain Bailey of the whaling schooner *Emma Jane*, of New London, which was anchored here. The landing of about 200 tons of instruments, material, provisions, coal, etc., was attended with considerable labor and danger, and the whale boats of the *Emma Jane* were of much assistance to us in towing our deep loaded boats. On the evening of the 11th, at 7 o'clock, while lashing the boats after a hard day's work, a gale arose suddenly, and with great force, from the northward and eastward. The steam launch was being hauled up to hook on, but the sea was so heavy that it was impossible to do it, and she was dropped astern for a lee. The ship had 120 fathoms on the starboard, and 60 on the port cable in 13 fathoms water, and commenced to drag rapidly. As soon as possible the fires were spread, and the ship steamed up to her anchors. She had only three miles to drag in before going on to the rocks on the opposite side. In the meantime, the steam launch broke adrift, and as there was no buoyancy to her in a seaway, I am under the impression that she went down. I made arrangements with Captain Bailey of the schooner *Emma Jane* to send his boats to look for her, and, if found after my leaving, to turn her over to Lieutenant Commander Ryan. Early on the morning of the 12th, got up the anchors, steamed back to anchorage, and continued the work of landing stores, building the house, and putting up tents. At one time there were only men enough on board to run the engines and veer chain, if necessary, all were so busily engaged in the work on shore. The property landed amounted to about 200 tons in weight. On the 13th, Lieutenant Commander Ryan informed me that everything the ship could do for him would be completed by 4 p. m. I cannot compliment too highly Lieutenant Commander Wright and the officers of the ship for the prompt and efficient manner in which the work was accomplished. They, with Lieut. Commander Ryan, Lieutenant Commander Train, and Past Assistant Surgeon Kidder, who are the naval officers of the Kerguelen party, prosecuted the work to a successful termination, and it could not have been accomplished within the time it was, three days, unless the utmost system, harmony, and good feeling had prevailed. We bade our comrades half a year's good-bye, leaving them on what is truly an Island of desolation, and the parting was like that of brothers by blood, as well as profession. We reached Hobart Town, Tasmania, on the 1st of October. The hospitalities of the city were extended to the ship by the Colonial Secretary, the Honorable A. D. Chapman, in the absence of his Excellency Governor Du Kane, who was on an inspecting tour in the north. The hospitalities and kind attentions to all under my command were simply unbounded, and every facility given in locating the parties under Captain Raymond and Professor Harkness. After careful observation Captain Raymond selected Campbell Town, some eighty miles north of Hobart Town,

which station, in the opinion of most of the people I conversed with, is as likely to be free from clouds as Hobart Town is on the day of the transit.

We arrived at Hobart Town without coal, so far as the expenditures exhibited, but the expenditures having been a little overestimated, we had plenty to steam into port with and filled up with the native coal, which does exceedingly well for steaming purposes, except that it makes a great deal of soot. It is very cheap, coasting about six dollars per ton. I left Hobart Town on Saturday the 10th, and arrived here to-day. The Bluff Harbor Party is landed, and I will leave to-morrow for Chatham Islands.

Very respectfully, etc.,

R. CHANDLER, Commander, Commanding.

CORRESPONDENCE.

The Editor of the ARMY AND NAVY JOURNAL does not hold himself responsible for individual expressions of opinion in communications published under this head. His purpose is to allow the largest freedom of discussion consistent with propriety and good feeling.

SLEEPING TORPEDOES.

To the Editor of the Army and Navy Journal.

SIR: The series of torpedo experiments that have been carried on against the iron ship *Oberon*, at Woolwich, must, I feel sure, cause serious doubts to be entertained by General Abbot, chief of the Army Torpedo Institution, respecting the power of the anchored torpedo as a defence of the harbor of New York. These experiments have shown conclusively that the power of this instrument has been greatly overrated; they are, indeed, another proof of the folly of relying on abstract theories, instead of depending on the only certain method, in such cases, in reaching trustworthy conclusion, viz., experiment. It would take hundreds of motionless torpedoes to be of any use in defending the approaches to such a harbor as New York, either singly or in "quintuple" groups, as may be chosen. Think of the miles of wire cable, the endless quantity of batteries, circuit closers, plane tables (if there is a haze or smoke what is the use of these?) and the scores of "stations for observers." The wires and torpedoes to be planted in channels where the tide often runs 7 to 8 knots, with the expectation that they are to remain in working order for weeks, if not months, and, finally, if they should explode, the effect would be nil, unless close to the enemy's side. I.

OFFENSIVE TORPEDOES.

To the Editor of the Army and Navy Journal.

SIR: Divine Providence has wisely ordained that the art of destroying our fellow creatures without risk to ourselves shall be one of difficult accomplishment, and in nothing is this more apparent than in the application of torpedoes to naval warfare and in coast defence.

Theoretically, there is not the least difficulty in the destruction of a hostile ship, endeavoring to enter the harbor of New York, by a pale student in Washington, who, poring over a chart of the approaches, and advertised by a couple of observers at Sandy Hook of the ship's approach to a line of torpedoes, follows her advances, touches a firing-key, and the explosion takes place.

The *Oberon* experiments show the practical difficulties to be so great that the submarine mine may be rejected as a means of defence, as not less than 1,000 large ones would be required to efficiently close this harbor. Those who have had some experience in electrical experiments will judge of the confusion and entanglements caused by a multiplicity of cables and batteries, the perplexity of observers, and the small probability of the system being kept in working order. The failures to ignite the charge, as in the last *Oberon* experiment, will be frequent, the chances of exploding them at the proper time very uncertain, and serious damages improbable.

We may place in the same category such movable torpedoes as are intended to be operated from a considerable distance, such as the *Lay* or the *Whitehead*. The first can be directed continuously and allowance made for inexact estimation of relative speeds, but the speed is too low to render success probable against a vigilant enemy. At very short ranges (say not exceeding 200 yards) the *Whitehead*, improved as described in your last number, should be a formidable weapon of offence or defence, but it will be very difficult for the vessel launching the torpedo to pass with safety through the fire of hostile guns to reach a proper position.

The projected armored torpedo boats we dismiss as incapable of sufficient speed, and fall back on the "bag of powder on the end of a pole," carried by small swift launches, as the most efficient means of harbor defence yet developed.

There is no offensive torpedo suitable for service in even moderately rough weather at sea. TORPEDO.

Messrs. Adamson and Commagère, who have lately opened an office in Washington, propose to look after all the routine business and personal interests of each officer who becomes their client by the payment of an annual fee of \$30. If an officer desires information of the movements, present or prospective, of troops in the Army or of ships or officers in the Navy, they will supply the information; and if an official account is delayed or suspended in the course of settlement they will personally examine the case, see what the exact cause of delay is, and, as far as is in their power, hasten settlement. Mr. Adamson was for a number of years the chief of a division in the Fourth Auditor's Office, and Mr. Commagère was formerly in the Army. They have fitted up pleasant and comfortable office rooms, and desire that their office shall become the Army and Navy headquarters or rendezvous in Washington; to this end they propose keeping a visitors' book, in which officers are invited to register their names.

THE NATIONAL GUARD.

ARSENAL DRILLS NEXT WEEK.—Monday, 14th, Sixty-ninth regiment; Tuesday, 15th, Company F, of the Seventh; Wednesday, 16th, Eighth regiment; Thursday, 17th, Company B, of the Seventh; Friday, 18th, Company H, of the Seventh; Monday, 21st, Company G, of the Seventh; Tuesday, 22d, Seventy-first regiment; Wednesday, 23d, Skidmore Guards; Monday, 28th, Eighth regiment; Tuesday, 29th, Sixty-ninth regiment.

JANUARY.—Friday, 8th, Seventy-first regiment; Monday, 11th, Sixty-ninth regiment; Wednesday, 13th, Eighth regiment; Thursday, 14th, Battery K, First division; Monday, 18th, Seventy-first regiment; Wednesday, 20th, Seventy-ninth regiment; Thursday, 21st, Eighth regiment; Monday, 25th, Sixty-ninth regiment; Tuesday, 26th, Fifty-fifth regiment; Wednesday, 27th, Twelfth regiment; Thursday, 28th, Eighth regiment.

SEVENTY-NINTH INFANTRY.—Lieutenant-Colonel Jos. Laing assumes command of this regiment, in orders as of December 1, 1874, and expresses a hope that the officers and members thereof will aid in bringing the command up to its original standard in drill and discipline, and increasing it in numbers and efficiency. Headquarters nights for the present will be on Monday and Wednesday evenings (unless otherwise ordered), at the regimental armory, from 8 to 10 o'clock, for the transaction of regimental business. The command will assemble in fatigue uniform at the State Arsenal, corner of Seventh avenue and Thirty-fifth street, on the following evenings, for instruction and drill, at 7:30 p. m.: Roll-call at 7:45 o'clock p. m. Line will be formed at 8 o'clock p. m.: Wednesday, December 9, 1874; Wednesday, January 20, 1875; Wednesday, February 17, 1875; Wednesday, March 17, 1875; Wednesday, April 21, 1875. Field and staff will report to the lieutenant-colonel commanding, non-commissioned staff and drum corps to the adjutant. These drills will be strictly private—no one will be admitted unless in uniform, military gentlemen and members of the press excepted. Lieutenant James B. Gillie, of Company E, is detailed as acting quartermaster. The lieutenant-colonel commanding reminds all members of the command that the full fine imposed by law for unexcusable absence from drills will be strictly enforced by court-martial.

We earnestly hope that the coming winter will see a change for the better in the Seventy-ninth. It has been in the slough of despond too long, and any change ought to be for the better.

TWENTY-SECOND INFANTRY.—The regiment will assemble at the armory, in fatigue uniform, for battalion drill, at 8 o'clock p. m., as follows: Companies A, B, I, and D, Monday, December 14; Companies H, K, F, G, and C, Friday, December 18. The officers will assemble at the armory, in citizen's dress, for theoretical instruction, on Friday, December 11, at 8 o'clock p. m. The non-commissioned officers will assemble at the armory, in fatigue uniform, for drill and instruction, on Thursday, December 10. The following promotion and appointments are announced: Private George T. Bunker to be second lieutenant Company K, vice Davies, promoted; Sergeant William H. Judson, left general guide, vice King, detailed as right general guide.

ELEVENTH INFANTRY.—The several companies of this command will assemble at the regimental armory in fatigue dress for drill and instructions on Thursday, December 10, and Thursday, December 17. Roll-call at 7:45 p. m. Non-commissioned staff and drum corps will report to the adjutant at 7:50 p. m. Line will be formed at 8 o'clock sharp. All members not present at the roll-call will be reported absent, and promptly ordered before court-martial. The attention of the rank and file is called to section 1 of General orders No. 7, current series, from regimental headquarters, and a more severe and skillful study of Upton's Revised Infantry Tactics is recommended to the commissioned officers of the command. The following elections and appointments are announced in regimental orders: Second Lieutenant G. Schumann elected first lieutenant of Company C, vice Wm. Hauser, promoted captain; Second Lieutenant George Gensch, first lieutenant of Company E, vice Henry Balz, promoted captain; First Lieutenant Jacob Muenzel, captain of Company H, vice H. Schmidt, resigned; F. C. Beyer, first lieutenant Company K, vice Cuno Mosshoff, vacated office. G. W. Wilson has been appointed quartermaster, vice John Bloch, who failed to qualify. Carl Herbst has been appointed ordinance sergeant in the non-commissioned staff, vice Wm. Weih. John Miesbach has been appointed chief bugler. The following officers have been commissioned by the Commander-in-Chief in the regiment, viz.: Wm. Hauser as captain Company C; Joseph Pohler as captain Company F; Julius Wohlbe as first lieutenant Company F, and John Quenzer as second lieutenant of Company G. First Lieutenant George Gensch has been directed to take command of Company E. All members who have any business to transact with the regimental surgeon are informed that his address is Dr. Herman F. Kudlich, 58 West Ninth street. Office hours from 7 to 9 A. M., 1 to 3 P. M., 6 to 9 P. M.

SEVENTY-FIRST INFANTRY.—The right wing of this regiment held a battalion drill at the arsenal on Monday evening, 7th inst., and Colonel Vose displayed good judgment in having it private. The fact was that at the last battalion drill, when the Seventy-first put on their bearskin shakos, the audience was a decided nuisance for drill purposes. They applauded everything indiscriminately, good and bad, and took the attention of the men from the commanding officer. Nothing delights the average audience like the thundering bang of "order arms" when the pieces come together; and this brought down the house every time. While it is very pleasant to be applauded, one does not like to be applauded for a mistake. Undiscriminating applause ceases to be a compliment, and at the last drill the audience applauded a ployment into double column, which was a decided bungle. Taking these things into consideration, Colonel Vose wisely made his wing drill a private one. The assumption by his regiment of the fur shako has necessitated much greater precision of drill to keep up the reputation of the command, and the colonel recognizes this fact and begins de novo. The drill of Monday night was in fatigue uniform, and largely devoted to the simpler movements without arms, the object being uniformity of movement. In some regiments this is left to the captains, and no doubt theoretically it might be. Practically, no two captains drill alike, and the time is sure to be different. One good battalion drill is worth three company drills, just as one good brigade drill is worth three battalion drills. The wing drill at present under notice was one of good hard work just where it was needed, in the direction of precision. In the field, doubtless, this precision is not needed, and dressing and alignments are little attended to, but for all that, the advantages of iron uniformity and precision of drill are many in time of peace. The grand advantage secured is the habit of simple unquestioning obedience, and the control over the men acquired by the officers. The Germans, the inventors of the loosest tactics of modern times, recognize this fact in the intervals between every combat, however brief the dispersion. They enforce in all movements in ranks the most wooden stiffness of mechan-

ical movement, entirely useless for real service, merely for the purpose of acquiring this control, and find their warrant in the result. Before the spring we hope to see the Seventy-first as precise in every movement as the Seventh, and more in accordance with the prescribed tactics, in length of step.

THE HAVEMEYER FUNERAL.—It is not every day that a Mayor of New York dies in office. In his way he holds a position as valuable and powerful as that of the Governor of the State, and it is but seldom that a Governor dies in office. As Mayor of the commercial metropolis of the Union, the Mayor of New York stands second to no one but the Governor of the State and the President of the United States, and we have only in a century lost two Presidents, "dead in the harness." The death of a prominent public functionary in office involves then a state of things not occurring often, and deserving of recognition. That this recognition was accorded to Mayor Havemeyer in the fullest manner, his funeral on Saturday, 5th inst., attests. Such a funeral has not been seen in New York since the Lincoln obsequies, and the effect of the procession was unquestionably fine, considering that none but citizen soldiery and civic organizations took part in the procession. The greater part of the Third brigade and the crack organization of the First took part in the procession, and distinguished themselves by the usual precision and beauty of movement which characterizes our city militia on the Russ pavement of Broadway.

The procession was of course late. This was to be expected. It was a volunteer procession, and such are always late. The intention was that line should be formed and the march taken up by 11 A. M. At 1 P. M. the procession had not yet started. Union Square and Fourth avenue were blocked, and still no sign of movement. The regiments were waiting patiently, only one wearing overcoats, and all growling at the cold, but still the procession would not move. The vicinity of St. Paul's M. E. Church in Fourth avenue, whence the funeral was to start, was thronged, and yet no procession. At last, when patience had ceased to be a virtue, the hearse moved slowly from the door, and the long line of the procession broke into column and moved off through Union Square and down the well-known ground of many a march—Broadway the famous. There was the Old Guard around the hearse, in three platoons, conspicuous in their lofty fur shakos and handsome uniforms, numbering sixty-eight muskets, and marching in the stiff and formal style of twenty years ago, when Scott's were the tactics and light and heavy infantry were recognized. There was the Seventh, as usual the strongest regiment on the ground, sweeping Broadway from curb to curb, with ten companies of twenty-four front. The Seventh's men were encased in overcoats, and looked as handsome as they always do, marching like pieces of machinery. The Eighth, Ninth, and Twenty-second followed, the whole brigade being headed by General Ward, of the First brigade N. G. S. N. Y. The Eighth regiment marched in division front of eighteen files, in full-dress uniform, without knapsacks or overcoats, looking very cold, but marching well. Then came the Twenty-second with eight companies of twenty front, all in full uniform, with knapsacks (overcoats rolled on the tops), looking as if they would have done much better to put on their overcoats. The Ninth had eight commands of twelve files, and looked demoralized, when compared with the days of old. The procession marched down Broadway—and save for the hearse and the Old Guard with reversed arms—the whole affair looked very little like a funeral. As a parade, it was a very fine sight, the Twenty-second and Seventh carrying off the honors. The former regiment, there is no denying, has the best band in the United States, and attracts proportional attention. The latter, as certainly, turns out a larger force of well drilled men than any regiment in the country. Its strong point is its numbers and the popularity of service in its ranks. It shows the best features of our old militia system, and the Havemeyer funeral brought that system out in its only good point—a pretty parade. But there the good ends. It was a cold day. Only one regiment had overcoats. Every one of the four had a different uniform. One part of the column (the Old Guard) drilled in different tactics from all the rest. Except the Seventh and Twenty-second, the regiments were mere skeletons. The question arises with inevitable force to the mind of a military observer, is it only to turn out a few regiments to a Broadway parade that all our efforts and the whole machinery of the so-called "Military Code" are adequate. Nominally five or six thousand men on the rolls of the First division, and only twelve hundred could be turned out to do honor to the grave of the chief magistrate of the city, and only half of those had overcoats to shelter them from the cold of a December day. If the new administration and Legislature does no better than the last for the National Guard, we shall not have one to boast of for many years.

ARMY RIFLE PRACTICE.—We have received from Captain A. B. McGowan, U. S. Army, a record of the target practice of his company (D, Twelfth U. S. Infantry) during the past month of November, which is full of interest to our National Guardsmen. The practice has been recorded in two ways, by the U. S. (measurement in inches) system, and by the Creedmoor system, so as to offer a basis of comparison with the Creedmoor practice. The comparison might be made closer and more interesting, however, were the conditions more closely imitated. It is a very desirable matter to constantly compare the shooting in our Regular Army and volunteer militia, and any records that tend to throw light on the subject are full of value. We give a full abstract of the present record that our readers may judge for themselves as to the similarity of the conditions.

Company D target was six feet square. In the middle was the Creedmoor target 6 feet by 4 feet, with 8 inch bull's-eye and 2 feet centre. The space of a foot on each side of the Creedmoor target was called the "border," and hits therein marked as 1 point. In the report of average of inches deviation from centre of target, misses are counted as 52 inches. The distance was 100 yards; position, standing; rounds, ten per man; fired in three days (18th, 19th, and 20th November last.) First two days very windy; wind across line of fire. Third day very cold, but no breeze. Place, Camp Independence, Ingo county, California. Contestants, 40. The report of totals is as follows: Number of bull's-eyes, 23; centres, 129; outs, 174; "borders," 28; misses, 46. Creedmoor count 827 points. (The report says 855, but it counts 28 "borders," which are not recognized except as misses at Creedmoor.) Number of hits, 326. (The report says 354, not allowed for same reason.) The same record of inches deviation needs correction for the same reason, and shows how unsatisfactory is the U. S. system as a comparison of results. The misses are all counted as 52 inches, when they may, for all the data given, have been many feet. The old adage that "a miss is as good as a mile" is especially true in rifle shooting.

The report, based on this system, gives the average of each shot at 21.1-3 inches deviation, and the average, on Creedmoor count, as 21.1-90 points. The true Creedmoor average is different, 400 shots being fired, and 1600 points being the highest possible score. The points actually made being 827, the average becomes 2.0675 points, a difference

of about 1-16 of a point. This is still very handsome shooting for soldiers, over 50 per cent. of the possible score. The only comparison we can make with it is that of Klein's Separate Troop, First Division, N. G. S. N. Y., and the Washington Grays, at Creedmoor on the same day, in last July, with excellent shooting weather. The distance was the same, 100 yards, and the numbers similar. We omit the 300 yard shooting, as beside the question of absolute comparison. In the Klein Troop it excelled that at the shorter range, all things considered. This troop numbered 47 men, fired 5 shots per man at 100 yards, with Remington carbine; position, standing; hot, sultry weather; faint breeze down line of fire. Result, 31 bulls-eyes, 98 centres, 94 outers, 12 misses; points made, 606; average per shot, 2,582.9 points. The Grays had 39 men under the same conditions. Result, 6 bulls-eyes, 44 centres, 129 outers, 16 misses; points made, 414; average per shot, 2,123.0 points.

The militiamen had the advantage of good weather; but the Klein Troop had only had one day's previous practice. The Grays had had none, and their carbines were just fresh from the factory the day before. The Klein carbines had been regulated to a uniform trigger-pull of 6-14 pounds. The Gray's carbines pulled all the way from 9 to 21 pounds. The previous record of Company D, Twelfth U. S. Infantry, shows the results of nine months' practice, and their weapon is the Springfield Allyn breech-loader. In our previous abstract based on the report of deviation in inches, sent by Captain McGowan, owing to the firing taking place before a smaller target, and misses being counted as only 20 inches, an erroneous impression was conveyed to the mind of the reader. The record appeared to be that of an average between centres and bulls-eyes—a result simply stupendous with regular troops, and totally unprecedented. The new report, furnishing correcter data, reduces this result to an average of outers—still very good shooting. It appears, however, that here, as in England and Canada, the volunteer militia beat the regulars in shooting. In the present case, when the difference in previous practice is balanced against the difference in weather, the result is remarkable. It becomes a very interesting question whether a great part of the result may not be due to the difference in weapons. We know that in the International Match at Creedmoor the Remington proved itself in the hands of Mr. Fulton the most exact gun ever made. We know that the Springfield, however sighted, has never been able to hold its own in the sporting rifle matches at Creedmoor. The single exception to this statement is Sergeant Turner's wonderful score of 27 out of 28 points at 200 yards with the Army Springfield in the last "Sportsmen's Match" on a very windy day, when the best score made by any other rifle was 23, and the average of all the winners, outside of Turner, was only 21.63.

We hope that the commanders of other companies in the U. S. service may be induced, from time to time, to send us reports of their shooting tabulated with the same care. In point of fact the record of Company D, Twelfth U. S. Infantry, not only seems to be but is lower this month than it appeared in our issue of October 31. That record, cleared of the erroneous impression conveyed by counting misses as 20 inches (in other words, Creedmoor outers), still leaves a very handsome margin at 100 yards, a deviation of only 8.05 inches for the hits, and an average of 2,092.5 points per shot out of 1,300 shots. This is shooting that no company need be ashamed of, and if the November practice has fallen a little (to 2,067.5) the difference of weather must be taken into due consideration. Again we repeat the hope that we may hear more of Regular Army practice, that we may be able to institute a careful comparison, and help to excite that rivalry which is essential to success.

VARIOUS ITEMS

THE Eighty-fourth drilled on Tuesday at the arsenal, and worked hard with effect. The Seventy-ninth drilled on Wednesday, same place. Lieutenant-Colonel Laing needs to come down a little sharper on his officers. The Seventy-ninth are looking out from their late cloud, however, and will do well before spring. Company D, of the Twelfth, had a fine time on Wednesday evening with their lecture and ball. We can't say much for the lecturer, but the audience and ball were all that could be wished. The Light Guard "receive," on Friday, 18th inst., at the Lexington Avenue Opera House. The opinion strengthens that no one in the Second brigade can be elected brigadier except Colonel Conkling, and he won't take the place. A proposition is being made to restore harmony by electing Lieutenant-Colonel C. B. Mitchell, of the division staff, to the position. He has the prestige of having been, before his present appointment, the oldest field officer in the Second brigade, except Colonel Conkling. By all means end the quarrels in some way. They are a disgrace to the brigade, although a consequence of the elective system of the so-called "Military Code."

CONNECTICUT.

FIRST INFANTRY.—Wing drills of this regiment are to be ordered at the link during the winter. It is the intention of Colonel Clapp to take the First regiment to Creedmoor next spring, leaving Hartford by boat in the afternoon and landing at Hunter's Point the next morning, thence by cars to the shooting grounds. Returning by boat the same night, arriving home next morning. The expense attending this proposed trip would not be very great upon the companies.

In pursuance to orders from the A. G. O., a battalion of this regiment (Companies A, B, F and H), under Colonel Clapp, paraded on Thursday, Dec. 3, as a funeral escort to the remains of Brevet Major-General R. O. Tyler, U. S. Volunteers, lieutenant-colonel U. S. Army, and Depot Quartermaster, Military Division of the Atlantic. The customary volleys were fired over the grave by a detachment of Companies B and F, under Lieutenant Moran of Company B. The battalion paraded four companies of sixteen files, with the regimental (Col's) band.

SECOND INFANTRY.—S. O. No. 73, A. G. O., November 30, announces the following promotions and appointments in the Connecticut National Guard: Field and staff, Second regiment, Lieutenant-Colonel John H. Barrio, of Meriden, to be colonel, vice Smith, resigned; Major George W. Tucker, of Waterbury, to be lieutenant-colonel, vice Barrio, promoted; Captain Jefferson B. Shaw, of New Haven, to be major, vice Tucker, promoted—all with rank from November 18. Company D, Third regiment—Sergeant J. Emerson Harrison, of New London, to be second lieutenant, vice Miner, resigned, with rank from November 9. Second Section Light Artillery—Second Lieutenant William H. Lee, of Guilford, to be first lieutenant, vice Hubbard, resigned; Sergeant Richard T. Kelsey, of Guilford, to be second lieutenant, vice Lee, promoted—both with rank from November 16. Lieutenant H. D. Phillips, commanding Company D, Second regiment, is ordered to warn the members of said company to appear at their armory to nominate a captain, vice Shaw, promoted.

Special Order, No. 73, A. G. O., of November 23, accepts the resignations of Captain John Cunningham and First Lieutenant John Carberry, Company C, Second regiment C. N. G. Lieutenant Maurice F. Brennan is ordered to warn the members of said company to appear at their armory to nominate a captain and first lieutenant.

Friday evening, Dec. 4, Second Lieutenant Maurice F. Brennan was elected captain. The new commandant was one of the organizers of the company, and has served it in various capacities ever since, having been elected second lieutenant in June, 1873, from the position of sergeant. Ex-Captain Cunningham was re-elected a member of the company, and expressed a determination to stand by the new captain as a private in the ranks.

Company F is holding weekly non-commissioned meetings for the study of tactics. The meetings are very successful, and said to be decidedly interesting, many fine points and questions being evolved.

At a meeting of those persons interested in forming a rifle club in New Haven, held at the armory of Company F, Lieutenant Colonel Fox, assistant adjutant-general, and James E. Stetson of the Winchester Rifle Club, were appointed to look for some place where a range of 500 yards could be had, the one at Miller's Garden not being considered safe.

The following are announced as part of Colonel Barrio's staff: Quartermaster S. P. Brown, New Haven, promoted from quartermaster sergeant; Surgeon Dr. C. J. Mansfield, Meriden, formerly of Twelfth New York Volunteers; Assistant Surgeon Dr. E. H. Riley, New Haven, re-appointed; Chaplain Rev. Alonzo N. Lewis, Westville, re-appointed.

THE TYLER FUNERAL.—The following special order was issued by the adjutant-general, Dec. 3, in reference to the death of the late Brevet Major-General Robert O. Tyler, formerly of Connecticut:

GENERAL HEADQUARTERS, STATE OF CONNECTICUT,
ADJUTANT-GENERAL'S OFFICE.
NEW HAVEN, December 3, 1874.

Special Order, No. 70.

The sad intelligence of the death of Brevet Major-General Robert O. Tyler, U. S. Army, has been received at these headquarters.

General Tyler was appointed by Governor Buckingham to the command of the Fourth regiment Connecticut Infantry Volunteers, September 3, 1861, and soon afterwards the regiment was changed from infantry to artillery, and designated the First regiment Connecticut Heavy Artillery. Under the command of Colonel Tyler, the regiment took a prominent part in the Peninsula campaign, and was engaged at the siege of Yorktown and the battles of Hanover Court House, Gettysburg, Malvern Hills, Chickahominy, and Golden's Hill. The high reputation for discipline and drill acquired by the regiment during its arduous services in the field, was due in a great measure to the acknowledged excellence and superior qualities of its commanding officer.

As a mark of respect to the memory of a brave soldier, and one of Connecticut's sons, it is ordered that the flag of the military departments of this State be displayed at half-mast, and the offices closed, on the day of the funeral, and that Colonel John B. Clapp, commanding First regiment, C. N. G., shall detail Companies A, B, F, and H, of said regiment, to act under his command, as funeral escort to the deceased.

By order of the Commander-in-Chief,
V. F. Throburn, Adjutant-General.
General Tyler, U. S. Army, was buried with full military honors at Cedar Hill Cemetery, Hartford, Thursday afternoon, Dec. 3. General Rufus Ingalls, Captain Thorne, formerly of General Tyler's staff, General Sawtelle, Colonel Grier, (of cavalry fame), General Franklin, and several officers of his old volunteer regiment. First Connecticut Heavy Artillery was present at the obsequies. The funeral took place at the residence of his father, Frederick Tyler, Esq., on Gordon street. His age was forty-two years eleven months.

ANSWERS TO CORRESPONDENTS.

G. H. GIBSON, Bristol, November 14, asks us to publish a list of the recruiting stations U. S. Army, with the officers attached to them. ANSWER.—You will find it fully published in orders under "Army" heading in the JOURNAL of 23 ult.

J. G. BOSTON, November 15, asks us—1st. What were the individual scores of Messrs. Fulton and Yale in each of the following contests: October 17, "Remington Badge"; November 3, "All Range"; also the score of Mr. Rigby in the latter? 2d. What is the highest individual score ever made in Great Britain at long range, at 300, 500, and 1,000 yards, 15 shots at each? 3d. When will the pamphlet containing the official report of the Fall Meeting N. R. A. be published, and what will be the price of the same? ANSWER.—1st. Fulton, 178; Yale, 178. Fulton best on longest range. Rigby score not officially taken. 2d. The best score was 169 in practice; never better than 166 in any match. 3d. Latter part of January. Probable price 25 cents to outsiders—free to members.

MECHANIC, Philadelphia, November 20, asks: What is the grade of machinist in the Navy? Do they rank as non-commissioned officers? Are their allowances the same as all enlisted men, or do they receive only monthly pay? Also, what are the duties of machinist? ANSWER.—See JOURNAL of November 21, 1874.

PRO BONO PUBLICO, Dorchester, Mass., November, 1874, writes: Please inform me what has become of the first rate iron-clad *Pasadenavay* and *Quinsigamond*; also, the sloops-of-war *Minnetonka* and *Moshulu*, if they have been launched, and if so, where and when. The vessels named were on the Navy Register of 1869, and the *Concord* and *Albatross* were ordered the *Massachusetts* (iron-clad), now on the stocks at Portsmouth, N. H., was formerly called the *Pasadenavay*. The change in name took place August 30, 1869. The *Oregon* (iron-clad), on stocks at Boston, was the *Quinsigamond*. Name changed at same time as above. The present *Severn*, at Boston, was formerly the *Moshulu*. The present *California*, now at San Francisco, was formerly the *Minnetonka*.

READER, Boston, November 23, asks where the hull and steam machinery of the *Junata*, which went in search of the *Polaris*, was built; also, where the hull and engines of the sloops *Bentick* and *Plymouth* were built, and when. Both vessels were built in England, the *Junata* which bore the remains of George Peabody to this country. ANSWER.—The hull of the *Junata* was built at the Philadelphia Navy-yard, and her machinery at Wilmington, by Pusey, Jones and Co. The *Plymouth* was formerly the *Kenosha*—built in New York, machinery built at Brooklyn Navy-yard. The *Bentick* was formerly the *Albatross*, and was launched at Portsmouth, N. H., August 18, 1868, and changed May 15, 1869. Machinery built at the Navy-yard, Boston, Mass.

SIGNAL MAN, Charleston, S. C., November 26, 1874, writes: 1st. Is the standard and morale of the Signal Corps better than the line of the Army? 2d. Is there anything special required of a man before he can enlist in the corps? 3d. Do you think the bill now pending in Congress for the appointment of post quarter-master-sergeants will pass at the sitting of the present session? ANSWER.—1st. Yes. 2d. We enclose an authoritative reply from Signal office which says: "It is almost impossible to convince applicants that the Signal Service is a matter of enlistment, not of appointment, and they all wish to be observers without being soldiers, whereas the office is determined that they shall be proper soldiers, and the change of names puts me off their track." This difference of view has also led to complaints after enlistment that the soldier had been deceived or had misapprehended the service, for which reason recruits are now invariably required to sign the circular at the time of enlistment." The report then encloses the following circular: "Entrance into this service in every case is by enlistment as a private soldier in the Regular Army of the United States, the pay, quarters, allowances, and duties being, in the first instance, and unless changed after instruction, detail or promotion, as hereinafter explained, those of a private soldier in the Signal Service, U. S. Army. All men enlisted are drilled in the use of arms and disciplined in the duties of soldiers. The term of service is five years, unless sooner discharged. The Secretary of War has power to grant discharges, which the office is authorized to pronounce when applied for by the soldier, and at times when no special injury to the service would result therefrom; but as a rule no application for discharge will be favorably entertained until after two years of faithful service, and not then except as above specified. With the single exception that men enlisting for the Signal Service will not be transferred to any other branch of the Army, no promise will be given which can alter or affect the usual terms of enlistment. The service, while strictly military, is also probationary, with opportunities for advancement, depending mainly on the good conduct and capacity of each individual, and it is intended to place competent men, who enlist with a view to promotion to the position of observer-sergeant, on duty where instruction can be obtained and opportunity for study afforded. The Chief Signal Officer, in his annual report for 1871 to the Secretary of War, recommended that a commission in the Army be given each year to the sergeant who shall in that year be reported as most distinguished for fidelity and ability, and in each of the years 1872 and 1873 an enlisted man of the Signal Service was

promoted to be a commissioned officer. Married men and those under twenty-one or over forty years of age are not enlisted. The standard height is five feet four inches and upward. Enlistments are confined to candidates who have passed an examination prior to enlistment, before a board appointed by the Chief Signal Officer, which meets at the office in Washington, D. C., every Thursday at noon, and before which they must appear at their own expense. Testimonials as to good character and capacity, signed by persons known at the office, must be presented, together with an application in the hand writing of the candidate (addressed to the Chief Signal Officer of the Army), stating his age, past and present avocation and residence. The examination will be chiefly directed to accurate spelling, legible hand writing, proficiency in arithmetic, with special attention to decimal fractions, and the geography of the United States. After a favorable report from the above-mentioned board, and also physical examination by the surgeon, the candidate will be enlisted, assigned to the Signal Service, and as a rule will be ordered for duty to Fort Whipple, Virginia, near Washington, where the Signal Service Detachment and School of Instruction is stationed, where he will be placed under the drill and discipline requisite for the Signal Service, which will continue for two months. After that time, if conduct being good, he will be ordered under special instruction to prepare for the duty of assistant to an observer on station; also performing the general duties of a soldier at hours when not required for instruction. When reported by the instructor as qualified, the enlisted man will, as the wants of the service require, be detailed on the above-mentioned duty of assistant. The length of time between being ordered under the above-mentioned duty as assistant, and being promoted to the position of observer, will be determined by the individual, but has averaged about six weeks. All soldiers of the Signal Service who have passed the above-described examination, and have been instructed and detailed on duty as assistant to an observer or station, or similar duty at the office, are required to perform such duties satisfactorily for six months before promotion from private to sergeant. As a rule, such men may, after the expiration of that time, be ordered to Fort Whipple as candidates for promotion, and after additional instruction, drill and discipline in the duties of soldiers, are examined by a Board of Final Examination, also appointed by the Chief Signal Officer, but differing from the Board of Preliminary Examination, before mentioned, both in its members and the character of examination, the latter being exclusively of the course of study and practice in the office, as also those of the duties of the service which the candidate has had the opportunity to become familiar after his enlistment. They will also be examined by a board of officers, convened at Fort Whipple, as to their proficiency in the military duties of a sergeant. On passing these examinations, the candidate will, as vacancies occur, be promoted to be sergeant, Signal Service, U. S. Army. The duties of an observer-sergeant on station, as also those of an assistant to an observer, will be chiefly those pertaining to the observation, record, and proper publication and report, at such times as may be required, of the state of the barometer, thermometer, hydrometer, rain-gauge, and other instruments (instruction in the use of which will be given under the directions of this office), and the report by telegraph or signal, at such times as indicated and to such places as may be designated by the Chief Signal Officer, of the observations as made, or such other information as may be required—the telegraphic reports to be forwarded by the regular telegraphic operators, or in such manner as may be directed. The utmost precision will be required in observations and reports. The specification of these particular duties is not to exclude such others connected therewith as may be necessary. The object of this plan is to insure the correctness and regularity of reports by having them made under military control. As it is desired to make this body of men especially select, rigid examinations will be insisted upon. All the duties will be performed strictly under the discipline of military law—all persons in the military service being subject to trial and punishment for improper conduct or neglect of duty under the Rules and Articles of War. The penalties for neglect of duty, bad conduct, etc., are dishonorable discharge, or such other punishment as a court-martial may direct, or as may be provided for by the customs of the service. The United States is entitled to the whole time of the person enlisted; but the duties required on stations are of such a nature that, with care and diligence, some time between the hours of reports, when no active duty is pressing, will generally be put at the disposal of the observer, which may be devoted to reading or study. Most of those already enlisted have had such purposes in view. No employment of this nature can, however, be permitted to interfere, in any way, with that prompt and constant attention to duty which will be insisted upon. The pay and allowances of both sergeant and private vary according to the character and place of duty, and the length of the service of each individual. They are as follows: Sergeants—When at Fort Whipple, on a military post, \$34.44; when on station, \$77.35; when at this office, \$95.06. Privates—When at Fort Whipple, Va., or at a military post, \$19.62; when on station, \$60.43; when at this office, \$90.89. Of the above amounts one dollar per month in the third year, two dollars per month in the fourth year, and three dollars per month in the fifth year are retained, and will not be paid until final discharge after faithful service. An allowance for clothing, averaging \$5.59 per month for sergeants and \$5.42 for privates, is also included in the above which, if clothing is not drawn in kind, is also retained until discharge. When at Fort Whipple, both sergeants and privates receive quarters and rations, and at all places, where, ill, provided with medical attendance and medicines. Applications are frequently made for enlistments in this service, conditioned upon the applicant being placed upon some specified duty or stationed at a particular place, it is to be clearly understood that no such qualification of the contract of enlistment will be allowed or considered, the wants of the service, which cannot be known in advance, regulating all details of duty." 3d. Not being politicians we cannot give you any information.

FAIR PLAY writes in just bitterness of spirit to the following effect referring to our answer of Nov. 21: "Through your JOURNAL I am informed that a debt due to me, of a non-commissioned staff officer, U. S. Army, is lost; as there is no existing law (military) which would compel payment, although the claim be acknowledged, but settlement refused. I believe that if the Government were to practice what they preach, and pay the enlisted man, because of the existence of this protection to the man who may be disposed to act dishonestly, a measure would be enacted, if not to compel such to act rightly, at least to prevent them from contracting obligations which they need not answer for afterwards. Otherwise it would seem that military law would assist in demoralizing the men whom it governs. Now, should the case be vice versa, or non-commissioned versus private, the claim would be made by the man in power, and compulsion to pay would be the result, or an alternative of continual petty tyrannies which his position would warrant in several indirect ways. Thus in a great measure he is secure against imposition; while the private soldier has to be contented with the assurance that a debt of his is irrecoverably lost unless honor comes to the rescue. To my mode of reasoning that seems very unjust. This as well as other grievances, under which the private has to serve his term of enlistment, tends, in no small degree to disgust him with his lot and embitter his mind against the Army; and I am confident that they are altogether unknown to the authority from whom amendment would emanate." ANSWER.—Your case is undoubtedly a hard one, but we are by no means certain that legislative interference would mend it. If your debtor were a commissioned officer you would have a hold upon him for "conduct unbecoming," etc. As it is, he is a "noncom," and your only redress is with the commanding officer, outside of the law, by moral means. Then your antagonist must tell his story. He may swear his case through against you. The whole trouble is that you have trusted a scoundrel. All the laws in the world could not make him an honest man or a responsible one. Our sincere advice is, pocket your loss, and don't lend any more money to non-commissioned staff officers. It does not pay. Every man is liable to make a bad investment, but only children keep on crying over split milk.

A DESPATCH to the Associated Press from Washington, says: Commander William R. Cushing, U. S. N., whose mental condition has recently been a subject of some anxiety to his friends, has become insane, and was on Monday evening removed to the Government Hospital for the insane.

FOREIGN ITEMS.

The Russian Government has despatched a naval attaché to the Berlin Embassy for the purpose of reporting on the progress of the Prussian navy. Russia has hitherto sent naval attaches only to London and Paris.

The *Army and Navy Gazette* recommends staff officers, etc., to look out for the *Stadimetre Geographique* described in our French contemporary, which gives, by a simple reading, the length of any line, straight, curved or broken, on maps and plans of every description of scale.

A TELEGRAM, dated Madrid, Nov. 16, says: "The statement made by several foreign newspapers that M. Bazaine intended to offer his services in a military capacity to the Spanish Government is entirely without foundation. He is expected to arrive here next Thursday, and will reside in Madrid as a private individual."

We had supposed, says the London *Army and Navy Gazette*, that the oldest artillery officer living was Captain Robert A. Rollo, now on half pay, who joined the army, August 17, 1803, and has been captain since December 29, 1810. In column 172 of the "Army List" for November will be found the name of Captain C. C. Saxton, who has, it seems, held his present rank since November 10, 1796. The "Army List" makes Captain Saxton out to be a veteran indeed. The Comte de Chabot, father of the Comte de Jarnac, Ambassador of France at the Court of St. James's, is, we believe, the oldest holder of a Royal Commission in the British service now alive, for Captain Saxton must be impossible.

A LETTER from Berlin, the writer of which is entitled to credit, says: "To the ordinary military budget 226,000,000f. has to be added, devoted to the manufacture of muskets and cannon, the construction or strengthening of fortresses, and the construction of strategic railways. This extraordinary expenditure, spread over years, has been long voted, and the 226,000,000f. to be voted for 1875 brings up the entire war budget to 626,000,000f. with 36 millions for the navy. The bill on the Landsturm will be passed without any amendment, and it is calculated that for the cadres of this new contingent, 6,262 officers will be required.

The calibre of the English 38-ton gun has been fixed at 12.12 in., which, until the completion of the 81-ton gun, may safely be pronounced the most powerful piece of ordnance in existence. This arm is similar in construction to the 35-ton gun, but is 3 ft. longer, and the projectile is 800 lb. instead of 700 lb. Experiments are being carried out by the Committee on Explosives, in order to determine the kind of powder best suited to these large calibres, the guns having somewhat outgrown the food originally provided for them in the form of pebble powder. The experimental powders under consideration differ materially in appearance from ordinary gunpowder. The "grains" are mostly in the shape of cubes, and various sizes have been tried, some measuring as much as 2 in. along the edge. It is expected that about 130 lb. of powder will be the charge for the 38-ton gun.

GENERAL DE CISSEY has just written a highly complimentary letter to Colonel Reffye, Director of the Arsenal of Tarbes, on the subject of the breech-loading field-piece invented by him, and now adopted in the French service. The War Minister says that the regiments have the greatest confidence in their new piece, and that the only guns which have been damaged were some made by private firms during the war. "The system of artillery, which the army, through gratitude, has called after your name, has allowed us the space of fifteen months to re-constitute our field batteries." General de Cissey also mentions that "our first line of defence" will also soon be armed with the Reffye guns. These guns were first used in Paris during the siege; General Ducrot had them when he crossed the loop of the Marne and attacked the German lines at Champigny; the Reffyes were then highly spoken of; but not only were the troops not used to them, but the weather was so bitterly cold that the breech apparatus had not fair play.

A SERIES of Royal ordinances lately issued at Munich to extend the system of tribunals of honor used in all Prussian regiments to Bavarian officers enables the military principles under which these peculiar courts act to be studied with great clearness. The king desires that the tribunal of honor to be instituted in every regiment is to be considered as the organ of the commanding officer, and not as an independent machine. Its original function in case of a report of discreditable conduct is simply to furnish him with its opinion as to whether the case is a proper one to come before it. If he does not choose to act on the view that it is so, the matter is to be forthwith dropped. If he agrees that it should be inquired into, the court is then to proceed to take the necessary action, hear evidence, and decide what is to be done; certain grave cases of breaches of discipline only being reserved, for which a court-martial might be necessary, as these are beyond the province of the courts. Officers whose conduct has come before the tribunal are to be taken off all duty, and, in fact, placed in open arrest for the time being; so as to deprive them of any pretext for pursuing

their own quarrel further without the leave of the tribunal of honor.

A RIFLED 64-pounder converted gun has been presented by Sir William Palliser to the Staff College at Sandhurst, where it has been mounted upon a carriage by the commandant, Colonel Hamley, C. B. This gun has fired 3,286 rounds, the last hundred shots being with 14 lb. charges, whereas 8 lb. only is the regular service charge, and at the end of the trial the gun remained quite uninjured. This test was so severe a one that two wrought-iron 64-pounders burst while undergoing it. The Palliser guns have now been extensively introduced into both land and sea services. One of them has lately made very good practice at upwards of two miles range, the extreme range being upwards of four miles. It appears by the army manufacturing accounts last year that the cost of converting these guns was £100 each, while the cost of the wrought-iron 64-pounders was £272 each. About 1,500 of these guns have now been converted, at a cost of about £150,000. The same number of wrought-iron 64-pounders would have cost £408,000; the saving, therefore, already has amounted to £258,000.

THE *Borsenzeitung*, of Berlin, says that it may now be regarded as certain that the ironclad frigate *Great Elector*, which is being built at Wilhelmshafen, will be completed in the course of the ensuing year, and that Germany will then have five new ironclad frigates added to her fleet. The ironclad corvette *Hansa*, which it was hoped would have been completed at the end of this year, will not be ready for some months longer. The other smaller vessels to be completed in 1875 are a smooth-decked corvette (probably the *Freya*), an aviso, and a small torpedo-boat. In 1876 the fleet will be further increased by a second ironclad corvette, a smooth-decked corvette (the *Thunselda*), an aviso, and a large and a small torpedo-boat. The addition made to the fleet this year consisted only of the smooth-decked corvette *Louise*. All these corvettes are of 1,258 tons burthen; the horse-power of the *Ariadne* and *Louise* is 2,100, and of the *Freya* and *Thunselda* 2,400. They carry five guns and 230 men each. Two more gun-boats of the *Albatross* class will probably be built by the year 1880, and the fleet will then consist of thirty-eight vessels of all kinds. The crews of the new ironclad frigates *Kaiser* and *Deutschland* will amount to 600 men each, and those of the turret frigates *Borussia*, *Frederick the Great*, and *Great Elector* to 500 men each. The first two frigates are of 4,586 tons burthen, and their horse-power is 8,000, like that of the *König Wilhelm*. The others are only of 4,118 tons burthen, with a horse-power 5,400.

THE London *Times*' correspondent at St. Petersburg writes: "The new fort of Petro-Alexandrofsk, the most advanced outpost of Russian power on the Oxus, has been completed, and interesting letters from officers stationed in it now and then make their appearance in the press here. The *Academy Gazette* publishes a letter from a correspondent, who dates it Sept. 24 (Oct. 6 New Style). This shows that it takes nearly a month for letters to reach St. Petersburg from the Oxus—not a very long time, considering the roundabout way they have to be carried through the Kirghis deserts and Russian Turkestan. Petro-Alexandrofsk lies about 200 fathoms from a branch of the Oxus called the Kouvan Djerna (this latter word evidently intended for 'Durya,' a river), which is again separated from the main stream by 1.13 verst of low-lying land. The subsoil of the high bank on which it is situated is nothing but sand, which is covered, however, by a thick layer of clay. This latter is the material out of which the fortifications have been constructed. Although the garrison was composed of several companies, each of which probably contained 250 men, the sick list was almost nominal; there was seldom more than a single man in the hospital, fever cases were extremely rare, and typhus was altogether unknown. The very isolation of this outpost and the consequent absence of demoralising influences would account in some measure for this extraordinary absence of sickness, but still the climate itself must be exceptionally healthy on that part of the Oxus. What would not our doctors at Peshawur or Nowshera give to be able to show such a bill of health? I may add that I have seen several officers who have returned from Khiva, and they all speak in raptures of the purity and salubrity of the climate."

THE *Pull Mail Gazette* says that a German essayist, writing from official sources, has recently analysed with elaborate care the returns of horses owned in each province of Prussia for 1867 and for the present year in order to discover the exact effect of the war of 1870 and of the recent cavalry augmentations on the national supply. The drain has been very considerable, the numbers of horses held by private persons being lower in every one of the eleven provinces than they were seven years ago, with the exception of Posen, which shows a slight increase. There is an apparent diminution in the whole kingdom of 98,000, out nearly one-fourth of this represents merely a transfer to the army establishment, which is separately returned, and possesses 78,500 horses now against 54,300 owned by it in 1867, reducing the real national loss to about 78,000. It must be understood, however, that this large number by no means represents the actual waste; for, not to men-

tion the supplies seized or brought out of Prussia in 1870-71, there would have been a considerable percentage of increase on the supply of 1867 from home breeding efforts but for the one disturbing cause. The writer we are following believes that the loss will be more than covered in a few years, as vast numbers of agriculturists, in Prussia proper and Silesia especially, give their attention to rearing this particular stock, their efforts being largely supported by the government. At each of the government remount depots the breeder can make sure of receiving £24 down for any colt likely to prove fit for military work, as soon as it reaches three-and-a-half years of age; and he can thus realise a paying price without the risks which notoriously come later, as the War Office prefers buying its horses young and at a moderate price. The present effect of the system is to put a steady premium on the raising of foals, and year by year more farmers undertake the business.

M. WACHTER, military correspondent of the *Gaulois*, calls to task General Chareton, author of the reports to the commission on the new military laws, for saying that the officers of the Prussian infantry "are almost exclusively of noble family"; and taking at a random a page in the Prussian army list, he shows that out of fifty-eight lieutenants only sixteen bear a title or have the nobiliary particle prefixed to their name. The commoners among the subalterns of the Prussian army are more numerous than the nobles, not only in the infantry but also, and above all, in the artillery, which is known to have been until quite lately the least favored of the three arms. It, however, confining his attention to the infantry M. Wachter were to consult the list of majors, he would find the nobles rapidly increasing and the commoners decreasing in number. Among the lieutenant-colonels the nobles are greatly in preponderance; while the colonels are almost all noble. Formerly, indeed, a Prussian officer of commoner origin was required, on receiving colonel's commission, to adopt the "von," and, as a matter of fact there are now very few colonels in the Prussian infantry—there are more in the artillery—whose names are not decorated with that particle. Among the generals one finds the commoner names rare indeed; and the result of a careful search instituted some two years ago throughout the list of generals commanding divisions and generals commanding army corps was that every infantry general of the two highest grades was found to be a member, whether by inheritance or creation, of the nobility. It might be argued from these facts—and the argument is indeed often employed by the German democrats—that, though commoners may obtain commissions in the Prussian army, they must not expect promotion beyond the rank of captain, or perhaps of major. The answer with which this argument is usually met is, that promotion, at least up to the rank of major, is the same for every one, but that, after twelve years' service—which entitles an officer to claim an appointment as a civil functionary—a good many first lieutenants and captains abandon the military for the more profitable civil career, while the richer officers and members of military families remain.

SILVER PRESENTATION GIFTS.

THE Gorham Company, the well known silver-smiths of No. 1 Bond street, New York, offer the richest and largest assortment of choice articles in silver for wedding and presentation gifts and general family use to be found in the country. They were the designers and manufacturers of the ARMY AND NAVY JOURNAL prize cup presented at Creedmoor, and various prizes offered by the National Rifle Association, and the resources of their large establishment enable them to furnish regiments, companies or other organizations, at the shortest notice, with presentation pieces of silver modeled from special designs appropriate to the occasion.

If you wish to find any Army officer who chances to be in Chicago, it is only necessary to enquire at the Sherman House. They nearly all stop there.

IF YOU WANT the best "Elastic Truss" for rupture, or best "Elastic Stockings" for enlarged veins, etc., write to POMEROY & Co., 744 Broadway, N. Y.

MARRIED.

[Announcements of Marriages FIFTY CENTS each, and the nature and address of the party sending should accompany the notice.]

CORRA—LOGAN.—November 23, at the residence of the bride's parents, at Fort Shaw, M. T., by the Rev. Mr. Inoda, Major R. CORRA, U. S. Army, to FANNIE M., eldest daughter of Captain William Logan, U. S. Army.

DIED.

Brief announcements will be inserted under this head without charge. Obituary notices and resolutions should be paid for at the rate of two cents a word, unless it is intended to leave the question of their insertion to the discretion of the Editor.

MERCUR.—At Willets Point, N. Y., Nov. 30, JAMES EDWARD, only child of Lieut. James and Clara B. Mercur, aged one year and four days.